

## (Newspaper Advertisement)

### **PRE QUALIFICATION OF SUPPLIERS**

National Rural Support Programme (NRSP) is implementing Southern Punjab Poverty Alleviation Project (SPPAP). NRSP is assisting the Community Organizations working under SPPAP in pre qualification of suppliers for supply / installation / testing / commissioning of Solar PV systems. The details of required solar systems is provided below: -

Sr. No	District	Tehsil	Quantity	Sr. No	District	Tehsil	Quantity
1	Bahawalpur	Ahmadpur	121	6	Layyah	Layyah	131
2	Bahawalnagar	Minchanabad	98	7	Bhakhar	Darya Khan	150
3	Muzaffargarh	Jatoi	135	8	Mianwali	Isa Khel	141
4	Rajanpur	Rajanpur	136	9	RY Khan	Liaquatpur	142
5	DG Khan	Taunsa Sharif	210	10	Khushab	Noor Pur Thal	43
		Kohe Suleman	71			Khushab	122

Details of terms & conditions are available in the pre qualification documents that can be downloaded free of cost from NRSP website <https://nrsp.org.pk/tenders/>. Last date for submission of proposals is **July 12, 2023 till 2:30pm**. NRSP reserve the right to accept or reject any/all proposals without any reason thereof or funding constraints.

NRSP on behalf of Community Organizations working under SPPAP  
National Rural Support Programme, 7th Sunrise Avenue, near COMSOTS University,  
park road, Chakshazad, Islamabad. Tel: +92(51) 8746170-173

Published on June 27, 2023 in The Daily Nawa e Waqat (KHI/MUL Edition) and  
The Daily News (RWP/LHR Editions)

**Disclaimer:** This prequalification is processed on behalf and request of community institutions of SPPAP-II project, NRSP, as a social mobilization partner in SPPAP-II, does not take any responsibility or liability arising out of any force majeure and conflict with communities during project execution.

**Prequalification Documents**

**For**

**Shortlisting of the Suppliers**

**and**

**Supply/Testing/Commissioning/Installation of Solar PV Systems**

**through**

**Community Institutions (CIs)**

**under**

**Southern Punjab Poverty Elevation Project (SPPAP).**

## ***Table of Contents***

1. Introduction .....	6
2. Background and Methodology .....	6
3. Procurement of Items .....	6
4. Eligibility .....	7
5. Submission .....	9
6. Deliverables.....	10
7. Terms of prequalification documents.....	11
8. Submission of prequalification documents .....	11
9. Evaluation Criteria .....	11
10. Fees and payment Schedule .....	12
11. Paying Authority .....	12
12. Delivery Schedule.....	12
13. Warranty & Maintenance .....	13
14. Penalty for down time .....	13
15. Penalty on Liquidated Damages for delayed supply.....	13
16. Currency.....	13
17. Cost of prequalification documents.....	13
18. Deadline for Submission of prequalification documents .....	13
19. Confidentiality Statement.....	14
20. General Terms & Conditions.....	14
21. Special Conditions.....	15
22. Rejection of the Prequalification documents .....	16
23. Modifications and Withdrawal of Proposals .....	16
24. Opening and Evaluation.....	16
25. Clarifications .....	17
26. Purchaser's Right to Accept or Reject any or all Proposals .....	17
27. Governing Laws and Disputes.....	17
28. Placement of Order and Acceptance.....	18
29. Authorized Signatory .....	18
30. Appeal.....	18

Annexure – I.....	19
Annexure-II .....	26
Annexure-III.....	36
Annexure-IV.....	38
Annexure-V .....	39
Annexure-VI.....	40
Annex-VII .....	49

<b>Details</b>		
1.	Date of availability of documents on NRSP website	<b>June 27, 2023</b>
2.	Last date and time for sending queries/question or clarifications by suppliers	<b>July 04, 2023</b>
3.	Last date and time for reply of queries/question or clarifications by NRSP	<b>July 05, 2023</b>
4.	Last date, time and address for receipt of Documents/ Proposals (in hard copies)	<b>July 12, 2023 by 2:30 p.m.(PST)</b> National Rural Support Programme, #7 Sunrise avenue, Near COMSATS University, Park Road, Chak Shahzad, Islamabad, Tel:+92(51) 8746170-173
5.	Date and Time of Opening of Technical Proposals	<b>July 12, 2023 by 3:00 p.m.(PST)</b>
6.	Place of opening	National Rural Support Programme, #7 Sunrise avenue, Near COMSATS University, Park Road, Chak Shahzad, Islamabad, Tel:+92(51) 8746170-173
7.	Address for communication and correspondence	National Rural Support Programme, #7 Sunrise avenue, Near COMSATS University, Park Road, Chak Shahzad, Islamabad, Tel:+92(51) 8746170-173
8.	Contact for Suppliers	Interested Suppliers are requested to send their queries on the following email: <a href="mailto:procurement@nrsp.org.pk">procurement@nrsp.org.pk</a> . The email query should clearly mentioned the following details, so that in case of any clarification, the same maybe issued to them: <ul style="list-style-type: none"> <li>Name of Company, Contact person, Mailing address, Telephone No. Email address, Mobile No. etc</li> </ul>

**Note: Technical Proposals** will be opened in presence of the supplier's representative who chooses/authorized to attend.

## **1. Introduction**

Established in 1991, NRSP is the largest Rural Support Programme in the country in terms of outreach, staff and development activities. It is a not for profit organization registered under Section 42 of Companies Act 2017 (repealed Companies Ordinance 1984).

NRSP's mandate is to alleviate poverty by harnessing people's potential and undertake development activities in Pakistan. It has a presence in 72 Districts in all the four Provinces including Azad Jammu and Kashmir through Regional Offices and Field Offices. NRSP is currently working with more than 3.8 million poor households organized into a network of 246,705 Community Organizations. With sustained incremental growth, it is emerging as Pakistan's leading engine for poverty reduction and rural development.

## **2. Background and Methodology**

Southern Punjab Poverty Alleviation Project (SPPAP) is an IFAD Assisted Project of Government of the Punjab. Main objective of the project is to increase income of 80,000 households by enhancing the employment potential of the people, increasing agriculture/ livestock production through a well-defined mechanism of assets transfer, productivity enhancement initiatives, vocational and entrepreneurship training and small scale Community Physical Infrastructure (CPI). As per intervention, SPPAP intends to provide Low Cost Housing Units to poorest women who are having their BISP score between 0 to 11. This Low Cost Housing Unit is equipped with 200 watt solar home lighting system.

The process will be first to check the Eligibility criteria as per clause 4 of these documents. Suppliers scoring the min marks will be eligible and their technical proposals will be further evaluated against the given technical specifications. Suppliers who could not score the min marks in the eligibility criteria, their technical proposals will not be further processed. Financial proposals of only those suppliers will be opened whose technical proposals are approved/qualified.

NRSP will shortlist more than one suppliers and first preference will be given to supplier who is eligible, his technical proposal is approved and his financial proposal is lowest. Second and third preference will be given to second and third lowest financial proposal provide they are eligible and their technical proposals are approved. If first lowest supplier could not deliver the systems as per required/approved specs in given time or any capacity issue or for any other reason than second and third supplier will be given chance to deliver the systems.

## **3. Procurement of Items**

NRSP is in process of shortlisting of companies/firms/suppliers for supply/ installation/ testing/ commissioning of Solar PV Systems (As per given technical Specifications) through its CI's.

**Total Number of PV Solar System Required**

**1500 Each  
(Total number may vary)**

As per below given geographic and year wise details (tentative):

Sr. No	District	Tehsil	Quantity
1	Bahawalpur	Ahmadpur	121
2	Bahawalnagar	Bahawalnagar	-
		Minchanabad	98
3	Muzaffargarh	Jatoi	135
4	Rajanpur	Rajanpur	136
5	RY Khan	Liaqatpur	142
6	DG Khan	Taunsa Sharif	210
		Kohe Suleman	71
7	Layyah	Layyah	131
8	Bhakhar	Darya Khan	150
9	Mianwali	Isa Khel	141
10	Khushab	Noor Pur Thal	43
		Khushab	122
Total:			1,500

The details are given below whereas complete specifications are given in **Annex - I**

#### Details of items for each Solar PV System

Items/description	No. of Pcs	Qty
1. Solar Panel, 200Wp, A Grade	1 or 2 Pcs	1
2. Battery, 45Ah-12V @10H,	1 Pcs	1
3. Charge Controller, 20Amp PWM/MPPT	1 Pcs	1
4. Enclosure Box	1 Pcs	1
5. Mounting Structure	1 Pcs	1
6. LED lights 5W	5 Pcs	5
7. DC Celling Fan	1 Pcs	1
8. Misc. Accessories, Breakers, fuses, jacks, clamps, ducts, switches, cables, nut bolts, enclosure box stand, bulb cover(only for outer bulbs) etc.	1 Lot	1
9. Concrete Blocks	4 Pcs	4
10. Installation and Logistics	1 Job	1

Specifications of individual components are given in **Annex-I**

#### 4. Eligibility

Eligibility criteria for the suppliers to participate is given below:-

- 4.1 Relevant Local Experience
- 4.2 Pakistan Engineering Council (PEC) Registration.
- 4.3 Financial Position & Registration
- 4.4 a) deleted.  
b) Undertaking on Rs.100/- stamp paper dully attested by Notary Public for not blacklisted. **(Format given in Annex VII)**

### Scoring details

S. No	Description	Max Marks	Remarks		Min Marks
1	Relevant Solar Experience within Pakistan	30	3 or more projects of similar nature within Pakistan	30	10
			2 projects of similar nature within Pakistan	20	
			1 project of similar nature within Pakistan	10	
2	Certification & Enlistment	30	The firm must have PEC registration in min. C-4 category with work limit of PKR. 160 Million	10	10
			The firm must have approved Field of Specialization from PEC in Solar systems (EE-11& EE-06)	10	10
			The firm must have PEC certified team of Engineers (each Engineer will have 2.5 marks)	10	5
3	Financial Position	15	Average annual turnover less than Rs. 100 million in past three years should be verifiable as per audit reports.	5	5
			Average annual turnover more than Rs. 100 million in past three years should be verifiable as per audit reports.	10	
			The firm must have valid and active NTN	05	05
4	Compliant with required technical specifications	15	Offered solar system (all items) are as per required specification (refer to technical compliance sheet)	15	15
5	Undertaken on stamp paper of Rs.100/-that it has been never been blacklisted or never been involved in litigation with government or private organization in PV line of business	10	As per clause 4.4	10	10
Totals:-		100			70



**The Minimum score required for eligibility is 70 Marks with minimum marks in each category. Failing to score minimum score in any category will result in ineligibility of supplier.**

## **5. Submission**

- 5.1. Prequalification documents (Technical and Financial proposals) should be submitted in separate envelopes with clearly mentioned as  
“Technical Proposal under Ref# NRSP-SPPAP-III/Solar/2023  
and  
“Financial Proposal under Ref# NRSP-SPPAP-III/Solar/2023
- 5.2. Technical proposal should have the below mentioned documents at least:
  - 5.2.1 Documentary Evidence in the shape of Completion Certificate from client of experience for the successfully completed projects for the supply and installation of Solar PV Systems in Govt. and Private Sectors.
  - 5.2.2 Copy of Valid PEC registration certificate with complete details. If it is expired pls attach proof of submission of renewal.
  - 5.2.3 CVs of professional engineers working with supplier should clearly mention their PEC registration numbers.
  - 5.2.4 Copy of audited accounts duly signed by the audit firm for the last three financial years.
  - 5.2.5 deleted.
  - 5.2.6 Undertaking that Firm has never been blacklisted or never been involved in litigation with any government or private organization in PV line of business on Rs.100/- stamp paper dully attested by notary public. **(as per format attached as Annex VII).**
  - 5.2.7 Valid NTN Certificate.
  - 5.2.8 Technical Details for the items being offered with technical data sheet/broachers/catalog/etc.
  - 5.2.9 Technical compliance sheet **(Annex II)**
  - 5.2.10 Updated company Profile.
  - 5.2.11 Any other documents
- 5.3. Financial proposal should have the below mentioned documents at least:
  - 5.3.1 Financial proposal for each item as per provided format (Annex-III) and total cost of each solar PV system including all applicable taxes.
  - 5.3.2 Earnest Money/Bid Security as per clause 7.1.
  - 5.3.3 Any other documents
- 5.4. Prices shall include transportation/Freight, all applicable taxes and Transit Insurance charges, loading/unloading, installation/testing and commissioning of the solar systems till the destination which are Project Districts/Tehsils as mentioned above in section 3.
- 5.5. The supplier should take care in submitting the proposal and ensure that enclosed papers are not found loose and should be properly numbered and submitted in a file in proper manner so that the papers do not bulge out and tear during scrutiny.
- 5.6. Last Date of Submission is July 12, 2023 till 2:30 pm local time.
- 5.7. The proposals against this prequalification document must be submitted not later than July 12, 2023 till 02:30 pm local time to the point of contact given below.

Electronic proposals will not be entertained. Any proposal delivered after due date and time will be considered non-responsive and dis-qualified from further consideration.

- 5.8. The Prequalification documents should be addressed to:  
(Technical Proposal under Ref# NRSP-SPPAP-III/Solar/2023 Community Institutions (CIs) of NRSP  
Via  
National Rural Support Programme  
#7 Sunrise avenue, Near COMSATS University,  
Park Road, Chak Shahzad, Islamabad, Tel:+92(51) 8746170-173  
And  
(Financial Proposal under Ref# NRSP-SPPAP-III/Solar/2023 Community Institutions (CIs) of NRSP  
Via  
National Rural Support Programme  
#7 Sunrise avenue, Near COMSATS University,  
Park Road, Chak Shahzad, Islamabad, Tel:+92(51) 8746170-173
- 5.9. Proposal your best prices keeping in view the complete terms and conditions of the prequalification documents and will be fixed during the period of this phase which is till December, 2023 or till the completion of the awarded solar systems.
- 5.10. The purchaser reserves the right for conducting pre-shipment inspection by its own personnel or reputed third parties. The selected supplier has to offer the items for inspection in such a manner that it does not affect the delivery schedule.
- 5.11. Payment of applicable taxes to Govt. of Pakistan is be responsibility of supplier.
- 5.12. Samples will be called from technically and financially responsive suppliers at later stage.
- 5.13. The proposal should remain valid for a period of 90 days from the closing date of the financial proposal. Any proposal falling short of the validity period is liable for rejection. If a supplier re-extend proposal validity period, then will also extend the proposal security period.
- 5.14. Clearance of the equipment from Tax/Govt. Authorities would be the responsibility of the supplier.
- 5.15. Selected supplier must undertake to provide the purchaser, the consignment note number(s) by which the items ordered had been dispatched from their site, so as to have online/ web access to the tracking system of physical movement of the consignments sent through courier.
- 5.16. The supplier may withdraw its proposal after its submission, provided that written notice of withdrawal is received by the purchaser prior to the closing date and time prescribed for submission of Prequalification documents. No proposal can be withdrawn by the supplier subsequent to the closing date and time for submission of proposals.

## **6. Deliverables**

Solar PV Systems as per details given section 3.

## ***7. Terms of prequalification documents***

### **7.1. Earnest Money/Bid Security**

All suppliers shall furnish Security Deposit equivalent to 2% of the total Cost of Deliverables/Financial Proposal in the form of Call deposit / Pay Order / Demand Draft in favor of NRSP. Cheque will not be accepted in any case. After selection of successful suppliers, NRSP will return / release the earnest money to the unsuccessful suppliers.

### **7.2 Performance Guarantee.**

Successful suppliers need to furnish the Insurance Guarantee from AA rated company for the 5% of the cost of the total systems to be delivered/ordered for the period of full 2 years. (As per attach format as Annex-IV)

## ***8. Submission of prequalification documents***

- 8.1. The proposal should comply with the technical specification required of the items as specified section 3 and **Annex-I**. The proposal should be complete in all respects and contain all information asked for, with prices the Technical specification must be organized neatly and securely in the following manner.
  - 8.1.1. Technical proposal as per details given in Clause 5.2
  - 8.1.2 Financial proposal as per details given in Clause 5.3
  - 8.1.3. Any other supporting document, if any.
- 8.2. If the proposal is not submitted in the prescribed formats or any of the item in the as mentioned above, the proposal is liable for outright rejection.
- 8.3. Once the proposal is submitted in sealed cover by the supplier, the purchaser will not accept any addition / alterations / deletions of the proposals. However, the purchaser reserves the right to seek clarification or call for supporting documents from any of the suppliers, for which the concerned supplier will need to submit the documentary evidence(s) as required by the purchaser.
- 8.4. Any proposal, submitted within incorrect information will be liable for rejection. Further, if any supplier is found to have submitted incorrect information at any time, he/she may be debarred from participation in the future procurement processes.

## ***9. Evaluation Criteria***

- 9.1. The Purchaser will scrutinize the proposals to determine whether it is complete, whether errors have been made in the proposal, whether required technical documentation has been furnished and whether the documents have been properly signed. Proposals with incorrect information or not supported by documentary evidence, wherever called for, would be summarily rejected.

However, the purchaser, at its sole discretion, may waive any minor non-conformity or any minor irregularity in any proposal. The Purchaser reserves the right for such waivers and this shall be binding on all suppliers.

- 9.2 More than one supplier will be shortlisted for all districts of the project. First preference will be given to the lowest responsive supplier as first prequalified/shortlisted supplier and in case of first supplier could not fulfill his obligations; purchaser can revert the current and balance orders to second or third prequalified/shortlisted supplier.
- 9.3. **Evaluation criteria will be ranked in the order of:**
- **First-Eligibility as per clause 4**
  - **Second- Qualifying technical specifications given in Annex-I,**
  - **Third- Lowest financial proposal for respective district/tehsil**
- Financial proposals of ONLY those suppliers will be opened who are eligible, technically qualified and approved. Deviation from specifications already stipulated may make the proposal liable for rejection.**
- 9.4. **Purchaser reserves the right to shortlist more than one supplier depending upon the workload and project deadlines.**
- 9.5. For proper scrutiny, evaluation and comparison of proposals, the purchaser may, at its discretion, ask form some or all suppliers for clarification of their proposals. The request for such clarifications and the response will necessarily be in writing.

## ***10. Fees and payment Schedule***

- 10.1. No advance will be allowed.
- 10.2. Payment will be made after the complete and satisfactory delivery / acceptance of the solar PV system to the designated delivery site/destinations/beneficiary household, testing, commissioning and operation of the PV systems within 2-3 weeks through cross cheque/online bank transfer in the name of supplier by the concerned Community Institutions (CIs) bank account **OR** Project Management Unit (PMU).
- 10.3. As the payment is made by the local Community Institutions (CIs) so no deduction will be made from the payment.

## ***11. Paying Authority***

The payments as per the Payment Schedule covered here in above shall be paid by respective Community Institutions (CIs) **OR** Project Management Unit (PMU).

Following Documents are to be submitted for Payment:

1. Satisfaction Certificate (As per attach format as **Annex -V**)
2. Bill/Invoice
3. Duly acknowledged Delivery Challan.

## ***12. Delivery Schedule***

- 12.1. The Selected suppliers must undertake to deliver the total systems till December 2023 on the basis of as and when required.
- 12.2. Supplier has to deliver and install at least 25 complete Solar PV systems per week. Delivery schedule may be changed under special circumstances at the discretion of the Purchaser.

### ***13. Warranty & Maintenance***

- 13.1. The supplier shall be fully responsible for the defected items and will be responsible to replace at his own cost within in 10-15 working days.
- 13.2. Standard Warranty for the complete solar PV systems is complete two years from the date of commissioning of each solar system for all items.

### ***14. Penalty for down time***

In case of delay in the supply of material against the terms indicated in the purchase order, the supplier will have to pay a penalty @ 0.5 %( Half) percent of the approved cost of the balance quantity of PV systems for each day of delay. If shipment is delayed for more than 15 days the Purchaser has the right to unilaterally cancel the contract/purchase order and his bid security will be forfeited.

### ***15. Penalty on Liquidated Damages for delayed supply***

In case the delivery is delayed beyond the stipulated date of delivery, 'Liquidated damage for late delivery @ (0.5%)of the Purchase order value for each day of delay or part thereof would be imposed, subject to maximum of 10% if the delay is for 10 days or more. The penalty for late delivery will be deducted from the bill amount.

### ***16. Currency***

All prices shall be expressed in Pakistani Rupees only.

### ***17. Cost of prequalification documents***

The supplier shall bear all the costs associated with the preparation and submission of prequalification documents, samples & testing of samples and Purchaser will in no case be responsible or liable for these costs regardless of the outcome of the bidding process.

### ***18. Deadline for Submission of prequalification documents***

Prequalification documents must be received by the Purchaser at the address specified in the documents not later than the specified date and time as specified in the Prequalification documents. In the event of the specified date of submission being declared a holiday for the Purchaser, the Prequalification documents will be received up to the stipulated time on next working day.

The Purchaser may, at its discretion, extend this deadline for submission of proposals by amending the Prequalification documents.

## ***19. Confidentiality Statement***

All data and information received from Purchaser for the purpose of this assignment is to be treated confidential and is to be used ONLY in connection with the execution of these Prequalification documents. All intellectual property rights arising from the execution of these deliverables are assigned to Purchaser. The contents of written materials obtained and used in this assignment may not be disclosed to any third party without the expressed advance written authorization of Purchaser.

Purchaser may then disclose the draft, final report and/or any related information to any person and for any purpose they may deem appropriate.

## ***20. General Terms & Conditions***

- 20.1. The Purchaser does not bind itself to accept the lowest or any proposal and reserves the right to reject any or all proposals at any point of time prior to the issuance of purchase order without assigning any reasons what so ever.
- 20.2. Purchaser has the right to increase or decrease the quantity by 15% of any item before the time of final order placing.
- 20.3. Purchaser has the right to split the order in two or more suppliers depending upon project time lines etc.
- 20.4. The Purchaser reserves the right to resort to repeat or repeal the process without providing any reason what so ever. The Purchaser shall not incur any liability on account of such rejection.
- 20.5. The tentative start date of the installation would around be Aug, 2023.
- 20.6. The Purchaser reserves the right to modify any terms, conditions, quantities or specifications for submission of Prequalification documents and to obtain revised proposals from the suppliers due to such changes, if any.
- 20.7. Canvassing of any kind will be a disqualification and the Purchaser may decide to cancel the shortlisting process from its empanelment.
- 20.8. The supplier is expected to examine all instructions, forms, Annexures, Terms and Conditions and specifications in the Prequalification documents. Submission of a proposal not responsive to the Prequalification documents in every respect will be at the supplier's risk and may result in the rejection of its proposal without any further reference to the supplier.

## 21. Special Conditions.

- 21.1. More than one supplier will be shortlisted for all districts of the project. First preference will be given to the lowest responsive supplier as first shortlisted supplier and in case of first supplier could not fulfill his obligations, purchaser can revert the current and balance orders to second or third prequalified/shortlisted supplier
- 21.2. Purchaser order will be issued by the respective Community Institutions (CIs) to successful supplier on the basis of as and when required the Solar PV systems. Supplier has to sign the tetra party contract agreement (Sample attached as **Annex-VI**).
- 21.3. Supplier has to complete the installation and commissioning of the Solar systems in the Small Housing Units at Community Institutions (CIs) level.
- 21.4. Shortlisted supplier need to submit the detailed work plan for each tehsil within 2 weeks of letter of award.
- 21.5. Supplier will provide one complete Solar PV system as per offered/required specification for testing from Al-Khawarazmi Institute of Computer Science (KICS), University of Engineering and Technology (UET) Lahore, the testing cost will also be paid by the supplier. The Project shall also get ONE random sample from each supplier for testing during project or when required by the Technical Committee (TC) from Al-Khawarazmi Institute of Computer Science (KICS), University of Engineering and Technology (UET) Lahore, the testing cost will also be paid by the supplier. List of tests is given below with tentative cost.

Test Name	Tentative Price (PKR)	Number of samples	Total	Duration
PV Module				
Visual Inspection Test	1000	1	1000	1 hour
Flash Test	12,000	1	12,000	3 hours
Electroluminescence Test	1,500	1	1,500	2 hours
Sub Total			14,500	
Battery				
Battery Capacity Test	15,000	1	15,000	2 days
Sub Total			15,000	
Charge Controller				
Functionality Verification Test	7,500	1	7,500	1 day
Sub Total			7,500	
LED Light				
Photometric Measurements	25,000	1	25,000	1 day
Sub Total			25,000	
DC Ceiling Fan & Stand Fan				
Performance verification	3,000	1	3,000	1 day

Minimum and Maximum RPM w.r.t voltage level	1,500	1	1,500	1 day
Sub Total			4,500	
Wires				
Strand Diameter (mm)	6,500	2	13,000	2 days
Overall Diameter (mm)				
Insulation Thickness (mm)				
DC resistance at 20°C (Ω/1000m)				
Insulation Resistance @ 70°C (MΩkm)				
High Voltage 2kV for 5 min				
Sub Total			13,000	
Grand Total PKR				79,500

## 22. Rejection of the Prequalification documents

The Prequalification documents are liable to be **rejected** if:

- The document doesn't bear signature of authorized person.
- It is received **through** Telegram/Fax/E-mail.
- If it is submitted without the security deposit in required shape of instrument.
- If only Technical or only financial proposal is received.
- If the technical proposal received without compliance sheet.
- It is received after **expiry** of the due date and time stipulated.
- **Incomplete Prequalification documents, including non-submission or non-furnishing of requisite documents/Conditional Proposals** not conforming to the Terms and condition stipulated in this Prequalification documents are liable for rejection by Purchaser.
- If any of the information provided is found incorrect/false or misleading.

## 23. Modifications and Withdrawal of Proposals

Prequalification documents once submitted will be treated as final and no further correspondence will be entertained on this.

- No proposal will be modified after the deadline for submission.
- No supplier shall be allowed to withdraw the Prequalification documents, if the supplier happens to be a successful supplier.

## 24. Opening and Evaluation

- The Purchaser will FIRST open the Prequalification documents (Technical



proposal), in the presence of supplier's representative(s) who choose/or are authorized to attend, at the time and date mentioned in Prequalification documents at the address mentioned.

- The supplier's representatives who are present shall sign the sheet certifying their attendance. In the event of the specified date of opening being declared a holiday for Purchaser, the proposal shall be opened at the stipulated time and place on next working day.
- Suppliers satisfying the eligibility criteria, technical requirements as determined by the Purchaser and accepting the Terms and Conditions of this document shall be short-listed for the opening of financial proposals. The Purchaser will subsequently open the Prequalification documents (Financial proposal) of technically qualified suppliers, in the presence of supplier's representative(s) who choose/or are authorized to attend, at the time and date to be communicated later.
- Decision of the Purchaser in this regard shall be final and binding on the suppliers.
- The contract will be awarded only to the successful responsive supplier(s).
- Purchaser reserves the right to negotiate with Second, third supplier, if successful supplier is unable to supply the deliverables and fulfill his obligations and his earnest money will be forfeited.

## ***25. Clarifications***

To assist in the examination, evaluation and comparison of Prequalification documents, the Purchaser may, at its discretion, ask the supplier for clarification. The response shall be in writing and no change in the substance or price of the proposal shall be sought, offered or permitted.

## ***26. Purchaser's Right to Accept or Reject any or all Proposals***

The Purchaser reserves the right to accept or reject any proposal, annul or repeat the process and reject all proposals at any time prior to award of contract, without there by incurring any liability to the affected supplier or suppliers or any obligation to inform the affected supplier or suppliers on the ground for the Purchaser's action.

## ***27. Governing Laws and Disputes***

All disputes or differences what so ever arising between the parties out of or in relation to the meaning and operation or effect of these Prequalification documents or breach there of shall be settled amicably. If however the parties are not able to solve them amicably, the same shall be settled by arbitration in accordance with the applicable Pakistani Laws, and the award made in pursuance there of shall be binding on the parties. The Arbitrator/Arbitrators shall give a reasoned award.

## ***28. Placement of Order and Acceptance***

The supplier shall give acceptance of the order placed on it within 7 working days from the date of order, failing which, the Purchaser shall have right to cancel the order.

## ***29. Authorized Signatory***

The supplier should indicate the **authorized officials from their organization** who can discuss, correspond, sign agreements/ contracts, raise invoice and accept payments and also to correspond.

## ***30. Appeal.***

The supplier can send their complaints or grievances in connection with this Prequalification and its shortlisting/finalizations to [complaints@nrsp.org.pk](mailto:complaints@nrsp.org.pk).

## Specifications of Individual components for Solar Systems

### 1. Photovoltaic Module

Parameters	Min. Specifications required
Module Make	Brand should be verifiable
PV Module model No	Verifiable
PV Module Capacity	200W <sub>p</sub> or above
PV Module Type	Mono/Polycrystalline
Cell Quality	A Grade
Efficiency	≥ 16% or higher for Poly
Power Tolerance	Must be +3 or more
Operating Temperature	–40 °C to +85°C
Temperature Coefficient	–0.43%/ °C or less
Bypass Diode	3 or more
Certification	Compliance against 61215,61730
Frame	Must Withstand 3600 PA Load
Junction Box	IP 65/ IP 66
Cable	4mm <sup>2</sup> (IEC)/12Awg(UL), 1000mm
Connectors	MC4 or Comparable

### 2. Battery (Provide Either a, or b)

#### a. Lithium Ion battery

Parameters	Min. Specifications required
Battery Make	Should be verifiable.
Battery Type	Lithium Ion battery (preferred LiFePO <sub>4</sub> )-12 Volt application package.(explosive free application)
Battery Capacity(Ah)	35 Ah or higher, 12 Volt @ 10 hour discharge

Parameters	Min. Specifications required
Maximum Continuous Discharge	20 Ampere or better
Maximum Charging current	20 Ampere or more (Fast charging capability)
Battery Life	2600 or higher @ 75 % DoD or better. Should be verifiable on data sheet. Manufacturer's conformity certificate cyclic life should be provided.
Self-Discharge	The maximum permissible self-discharge rate is maximum 4% percent of rated capacity per month at 25°C.
Operating temperature	-10°C ~ 65°C
Batteries tested and certified in accordance with	IEC60896-21/22, ISO9001(TUV), DIN43539-T5, IEC61427, DIN40742-773-774, DIN 40736, CE, TL, Storage Standard GB/T 22473 Or equaling Applicable
Manufacturing Date	8 Month or less (Evidence required)
Performance guarantee	3 years or more
Replacement Warranty	24 months
Battery shelf life	10 years or more at ambient temperature

#### b. Battery (SLA)

Parameters	Min. Specifications required
Battery Make	Should be verifiable.
Battery Type	AGM
Battery Capacity (Ah)	45 Ah-12 V @ 10hr discharge or batter
Battery Life	~800 @ 50% DoD, 3~10 HR discharge
Self-Discharge	The maximum permissible self-discharge rate is maximum 4% percent of rated capacity per month at 25°C, certified compliance of EN 60896-21.
Relief Valves	Self-regulating pressure relief valve
Operating temperature	-15° C ~ 45°C (Be within 2% of the operating time up to max. 50°)
Batteries tested and certified in accordance with	All applicable standards that may includes IEC60896-21/22, ISO9001(TUV), DIN43539-T5, IEC61427, DIN40742-773-774, DIN 40736, CE, TL, Storage Standard GB/T 22473
Manufacturing Date	Max. four Months (Evidence required)
Performance guarantee	3 Years Replacement

<b>Replacement Warranty</b>	24 months or more
<b>Brands</b>	Renowned and Verifiable

### 3. Cabling

1. All exposed wiring (with the possible exception of the module interconnects) must be covered in conduits/duct. Wiring through roofing, walls and other structures must be protected through the use of bushings. Wiring through roofing must form a waterproof seal (applicable for wiring only).
2. For conduit and duct flexible PVC material with ½ inch size must be used.
3. Field-installed wiring must be joined using terminal strips or screw connectors. Soldering or crimping in the field must be avoided if at all possible. Wire nuts are not allowed. The rated current carrying capacity of the joint must not be less than the circuit current rating. All connections must be made in junction boxes. Fittings for lights, switches, and polarity sensitive socket outlets may be used as junction boxes where practical.
4. All wiring shall be color coded and/or labeled.
5. Installation including wiring shall meet the requirement and recommendations given in 8.3 of IEC 62124 ed 1.
6. The commissioning and acceptance will be subject to the fulfillment of all requirements specified in the above mentioned paragraphs of IEC62124 ed.1 and additional requirement as detailed below.
7. No conduit or fitting shall be attached directly to thatch or any other non-supportive surface
8. Especially avoid installing the conduit direct over the roof; there must be distance not less than 1 inch between the roof surface and conduit/duct.
9. Cables must be joined by the use of unction boxes, screw-connectors, and block connectors.
10. All wires must be terminated with proper end sleeves and wire thimbles with different colors for positive and negative polarity.
11. Field installed wiring must be joined using terminal strips or screw connectors. Soldering or crimping in the field must be avoided if at all possible. Wire nuts are not allowed.
12. The rated current carrying capacity of the joint must not be less than the circuit current rating.
13. Fittings for PV, lights and battery must be with polarity sensitive socket outlets to avoid short circuiting.
14. Cable specifications are as followed.

Item	Requirement
<b>1. PV to Battery Box:</b>	4mm <sup>2</sup> or higher, 99.99% pure copper (Stranded and flexible) Make sure that the voltage drop at end node should not be more than 2%
<b>2. Charge Controller to Battery:</b>	10mm <sup>2</sup> or higher, 99.99% pure copper (Stranded and flexible) Make sure that the voltage drop at end node should not be more than 2%
<b>3. Battery box/ controller to Load:</b>	76/0.76 or higher, 99.99% pure copper (Stranded and flexible) for DC fan (for distance must not be more than 6 meters) 40/0.76 or higher for LED light USB standard cable for mobile charging (2 sets) Make sure that the voltage drop at end node should not be more than 2%

#### 4. Charge Controller

Parameters	Min. Specifications required
<b>Continuous Output DC Load Capacity</b>	20 Amps or above
<b>Type</b>	PWM type (3 stage charging) or (Preferably MPPT with 96 % or above tracker efficiency)
<b>Output Voltage Range</b>	As per design
<b>DC input rating</b>	250 Watts DC or above
<b>Battery Application</b>	12V / 24 V DC ( as per string design)
<b>Protections</b>	Short Circuiting Surge Protection PV reverse polarity protection Over charging voltage (Battery)
<b>Operating temperature Humidity</b>	0 to 45oC. 10 ~ 90%RH
<b>Alarm</b>	Alarm on major fault. Auto restart after 10 sec of major fault.
<b>Display and data storage</b>	Display on LCD with controller buttons. 6 month or more data storage with easy access through USB or equaling.
<b>Performance guarantee</b>	2 years Replacement

#### 5. Enclosure/Cabinet for Controller and Battery

	Description
<b>Enclosure Material</b>	M.S sheet/PVC/Fiber Glass / ABS Plastic

	Description
<b>Strength</b>	Capable of handling tensile force of 1.5 k newton
<b>Color</b>	Weatherproof and moisture proof
<b>Opening and Closing</b>	Must be fixed with durable mailbox (or compatible) lock and key (isolated for Controller and Battery)
<b>Battery housing</b>	Should be in a vented compartment that prevents users from coming in contact with Battery terminals.
<b>Harness</b>	Enclosure should have neat and clean appearance and have good harness even inside.
<b>Dimensions</b>	Should be calculated according to the Controller and Battery size for proper and easy operation, maintenance and proper heat vent.
<b>Finishing</b>	The sides of the Enclosure and its compartments must be closed and opened through screws for easy installation and maintenance.
	The sides of enclosure must be strip overlapped for safety and protection from rain.
	There should be a proper arrangement of ventilation especially for Controller.
<b>Screen Printing</b>	Enclosure casing must be screen printed of all the components installed on the enclosure like switches, sockets, fuses and indications name.
<b>Indications</b>	There should be some indication for PV, Battery, controller and load ON/OFF with their name.

**Enclosure must have followings connectors, Sockets and switches.**

**a. Sockets for DC connection**

S.no	Description	Qty.
1	PV Input socket (with reverse polarity protection)	01
2	DC LED light socket (with reverse polarity protection)	05
3	DC FAN socket (with reverse polarity protection)	01
4	USB for mobile phone charging	01

**b. Switches**

S.no	Description	Qty.
1	Battery ON/OFF (DC application)	01
2	Mobile, LED ON/OFF.	01
3	Fan(1 for each type of fan) ON/OFF	02
4	Lights (On/Off)	05

**Note:**

1. Circuit Breaker Voltage rating must be greater than the maximum circuit voltage and current rating must be between 125% - 150% of the maximum design current for the circuit.
2. Switches must have a clear visual indication of their state(ON/OFF or I/O)

**c. Fuses**

S.no	Description	Qty
1	DC LED light	01
2	Fan	01

**Note:** Fuse Holders must be used on outside the enclosure for easy replacement.

**6. PV Mounting Structure**

Description	Requirement
Structure material	Mild steel
Material Gauge	Gauge 12 or Batter
Wind loading	Mounting system should be able to allow air circulation for cooling in high temperature and withstand wind speed of 150 Km/hour at 3 sec gust
Adjustable mounting structure	Angle adjustment between 14° to 25 °
Material surface protection	Mounting structure should be Galvanized not less than 80 microns in case of hot dip & 30 microns in case of electroplating.
Operation and maintenance	Structure should be accessible for personnel to allow regular cleaning of the solar module
Concrete block weight	30 KG minimum compressed

**7. LED Lights**

Description	Requirement
Rod/ Blub Type	Aluminum or Ceramic casing (must have better heat dissipation)
Watts	5 Watts or less with lux output not less than 370 on Gonio Photometer
CRI	75 or better



<b>System efficiency</b>	75 lumens/watt or better at nominal. Be designed for lumen maintenance of L70 or 70% at the end of useful life at ambient temperature of 35 deg C
<b>Input voltage</b>	+/- 25 tolerance% of rated voltage
<b>Color Temperature</b>	5000-6500 K
<b>Working Temperature Range</b>	-10°C to +55°C
<b>Life Time</b>	20,000 Hours or more
<b>Beam Angle</b>	120 Degrees
<b>Lens/cover</b>	Frosted
<b>Optics</b>	No discoloration (UV protection) in 5 years of indoor operation, white painted circuit
<b>Thermal Dissipation</b>	Perfect contact between board and housing. Metal Core PCB mounted on housing with highly efficient thermal interface material. Silicon glue must be avoided.
<b>Photometric</b>	Light fittings must be marked with the manufacturer, model number, rated operating voltage, rated current and date of manufacture or batch number
<b>Test Reports form Manufacturers (recommended)</b>	Punjab Energy Efficiency & Conservation Agency (PEECA) specifications

## 8. DC Ceiling Fan

Description	Requirement
Sweep	1200 mm
Watts	35 Watt 15 % Tolerance in power consumption
RPM(Max)	≥ 280
Air Delivery	~ 150 Cubic Meter / minute ~ 10 % tolerance in air delivery
Voltage Range	12 V Application (or as per design)
Winding Wire	99.99 % Pure copper with durable enameled
Body	Metallic body with varnish insulation
Variable speed Controller	Robust button for On/Off/ variable speed operations
Documentation	CE, RoSH, UL / or PSQCA/NEECA compliance Data sheets and certifications should be provided
Performance guarantee	2 years Replacement

## TECHNICAL COMPLIANCE SHEET

### 1. Photovoltaic Module

S.No.	Parameters	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	Module Make	Brand should be verifiable - Mention brand & model			
2	PV Module model No	Verifiable			
3	PV Module Capacity	200W <sub>p</sub> or above			
4	PV Module Type	Mono/Polycrystalline			
5	Cell Quality	A Grade			
6	Efficiency	≥ 16% or higher for Poly			
7	Power Tolerance	Must be +3 or more			
8	Operating Temperature	-40 °C to +85°C			
9	Temperature Coefficient	-0.43%/ °c or less			
10	Bypass Diode	3 or more			
11	Certification	Compliance against 61215,61730			
12	Frame	Must Withstand 3600 PA Load			
13	Junction Box	IP 65/ IP 66			
14	Cable	4mm <sup>2</sup> (IEC)/12Awg(UL), 1000mm			
15	Connectors	MC4 or Comparable			

### 2a. Battery (Lithium Ion battery)

S.No.	Parameters	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	Battery Make	Brand should be verifiable - Mention brand & model			
2	Battery Type	Lithium Ion battery (preferred LiFePO <sub>4</sub> )-12 Volt application package.(explosive free application)			
3	Battery Capacity(Ah)	35 Ah or higher, 12 Volt @ 10 hour discharge			
4	Maximum Continuous Discharge	20 Ampere or better			

5	<b>Maximum Charging current</b>	20 Ampere or more (Fast charging capability)			
6	<b>Battery Life</b>	2600 or higher @ 75 % DoD or better.			
		Should be verifiable on data sheet.			
		Manufacturer's conformity certificate cyclic life should be provided.			
7	<b>Self-Discharge</b>	The maximum permissible self-discharge rate is maximum 4% percent of rated capacity per month at 25°C.			
8	<b>Operating temperature</b>	-10°C ~ 65°C			
9	<b>Batteries tested and certified in accordance with</b>	IEC60896-21/22, ISO9001(TUV), DIN43539-T5, IEC61427, DIN40742-773-774,DIN 40736, CE, TL,			
		Storage Standard GB/T 22473 Or equaling Applicable			
10	<b>Manufacturing Date</b>	8 Month or less (Evidence required)			
11	<b>Performance guarantee</b>	3 years or more			
12	<b>Replacement Warranty</b>	24 months			
13	<b>Battery shelf life</b>	10 years or more at ambient temperature			

## 2b. Battery (SLA)

S.No.	Parameters	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	<b>Battery Make</b>	Brand should be verifiable - Mention brand & model			
2	<b>Battery Type</b>	AGM			
3	<b>Battery Capacity (Ah)</b>	45 Ah-12 V @ 10hr discharge or batter			
4	<b>Battery Life</b>	~800 @ 50% DoD, 3~10 HR discharge			
5	<b>Self-Discharge</b>	The maximum permissible self-discharge rate is maximum 4% percent of rated capacity per month at 25°C, certified			

		compliance of EN 60896-21.			
6	<b>Relief Valves</b>	Self-regulating pressure relief valve			
7	<b>Operating temperature</b>	-15° C ~ 45°C (Be within 2% of the operating time up to max. 50°)			
8	<b>Batteries tested and certified in accordance with</b>	All applicable standards that may includes			
		IEC60896-21/22, ISO9001(TUV), DIN43539-T5, IEC61427, DIN40742-773-774, DIN 40736, CE, TL, Storage Standard GB/T 22473			
9	<b>Manufacturing Date</b>	Max. four Months (Evidence required)			
10	<b>Performance guarantee</b>	3 Years Replacement			
11	<b>Replacement Warranty</b>	24 months			
12	<b>Brands</b>	Renowned and Verifiable			

### 3. Cabling

S.No.	Parameters	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	All exposed wiring (with the possible exception of the module interconnects) must be covered in conduits/duct. Wiring through roofing, walls and other structures must be protected through the use of bushings. Wiring through roofing must form a waterproof seal (applicable for wiring only).				
2	For conduit and duct flexible PVC material with ½ inch size must be used.				
3	Field-installed wiring must be joined using terminal strips or screw connectors. Soldering or crimping in the field must be avoided if at all possible. Wire nuts are not allowed. The rated current carrying capacity of the joint must not be less than the circuit current rating. All connections must be made in junction boxes. Fittings for lights, switches, and polarity sensitive socket outlets may be used as junction boxes where practical.				
4	All wiring shall be color coded and/or labeled.				

5	Installation including wiring shall meet the requirement and recommendations given in 8.3 of IEC 62124 ed 1.			
6	The commissioning and acceptance will be subject to the fulfillment of all requirements specified in the above mentioned paragraphs of IEC62124 ed.1 and additional requirement as detailed below.			
7	No conduit or fitting shall be attached directly to thatch or any other non-supportive surface			
8	Especially avoid installing the conduit direct over the roof; there must be distance not less than 1 inch between the roof surface and conduit/duct.			
9	Cables must be joined by the use of uncton boxes, screw-connectors, and block connectors.			
10	All wires must be terminated with proper end sleeves and wire thimbles with different colors for positive and negative polarity.			
11	Field installed wiring must be joined using terminal strips or screw connectors. Soldering or crimping in the field must be avoided if at all possible. Wire nuts are not allowed.			
12	The rated current carrying capacity of the joint must not be less than the circuit current rating.			
13	Fittings for PV, lights and battery must be with polarity sensitive socket outlets to avoid short circuiting.			

14 Cable specifications are as followed.

S.No.	Item	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	<b>PV to Battery Box:</b>	4mm <sup>2</sup> or higher, 99.99% pure copper (Stranded and flexible)			
		Make sure that the voltage drop at end node should not be more than 2%			
2	<b>Charge Controller to Battery:</b>	10mm <sup>2</sup> or higher, 99.99% pure copper (Stranded and flexible)			
		Make sure that the voltage drop at end node should not be more than 2%			
3	<b>Battery box/ controller to Load:</b>	76/0.76 or higher, 99.99% pure copper (Stranded and flexible) for DC fan			

		(for distance must not be more than 6 meters)			
		40/0.76 or higher for LED light			
		USB standard cable for mobile charging (2 sets)			
		Make sure that the voltage drop at end node should not be more than 2%			

#### 4. Charge Controller

S.No.	Parameters	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	<b>Charge Controller Make</b>	Brand should be verifiable - Mention brand & model			
2	<b>Continuous Output DC Load Capacity</b>	20 Amps or above			
3	<b>Type</b>	PWM type (3 stage charging) or (Preferably MPPT with 96 % or above tracker efficiency)			
4	<b>Output Voltage Range</b>	As per design			
5	<b>DC input rating</b>	250 Watts DC or above			
6	<b>Battery Application</b>	12V / 24 V DC ( as per string design)			
7	<b>Protections</b>	Short Circuiting			
		Surge Protection			
		PV reverse polarity protection			
		Over charging voltage (Battery)			
8	<b>Operating temperature Humidity</b>	0 to 45oC. 10 ~ 90%RH			
9	<b>Alarm</b>	Alarm on major fault.			
		Auto restart after 10 sec of major fault.			
10	<b>Display and data storage</b>	Display on LCD with controller buttons.			
		6 month or more data storage with easy access through USB or equaling.			

11	Performance guarantee	2 years Replacement			
----	-----------------------	---------------------	--	--	--

#### 4. Enclosure/Cabinet for Controller and Battery

S.No.	Parameters	Min. Specifications required	Specifications Offered	Compliant (Yes/No)	Remarks (if any)
1	Enclosure Material	M.S sheet/PVC/Fiber Glass / ABS Plastic			
2	Strength	Capable of handling tensile force of 1.5 k newton			
3	Color	Weatherproof and moisture proof			
4	Opening and Closing	Must be fixed with durable mailbox (or compatible) lock and key (isolated for Controller and Battery)			
5	Battery housing	Should be in a vented compartment that prevents users from coming in contact with Battery terminals.			
6	Harness	Enclosure should have neat and clean appearance and have good harness even inside.			
7	Dimensions	Should be calculated according to the Controller and Battery size for proper and easy operation, maintenance and proper heat vent.			
8	Finishing	The sides of the Enclosure and its compartments must be closed and opened through screws for easy installation and maintenance.			
		The sides of enclosure must be strip overlapped for safety and protection from rain.			
		There should be a proper arrangement of ventilation especially for Controller.			

9	<b>Screen Printing</b>	Enclosure casing must be screen printed of all the components installed on the enclosure like switches, sockets, fuses and indications name.			
10	<b>Indications</b>	There should be some indication for PV, Battery, controller and load ON/OFF with their name.			

**Enclosure must have followings connectors,  
Sockets and switches.**

**a. Sockets for DC connection**

S. No	Description	Required Qty	Offered Qty	Compliant (Yes/No)	Remarks (if any)
1	PV Input socket (with reverse polarity protection)	1			
2	DC LED light socket (with reverse polarity protection)	5			
3	DC FAN socket (with reverse polarity protection)	1			
4	USB for mobile phone charging	1			

**b. Switches**

S. No	Description	Required Qty	Offered Qty	Compliant (Yes/No)	Remarks (if any)
1	PV Input socket (with reverse polarity protection)	Battery ON/OFF (DC application) - 1			
2	DC LED light socket (with reverse polarity protection)	Mobile, LED ON/OFF - 1			
3	DC FAN socket (with reverse polarity protection)	Fan(1 for each type of fan) ON/OFF - 2			
4	USB for mobile phone charging	Lights (On/Off) - 5			

**Note:**

- 1 Circuit Breaker Voltage rating must be greater than the maximum circuit voltage and current rating must be between 125% - 150% of the maximum design current for the circuit.



- 2 Switches must have a clear visual indication of their state(ON/OFF or I/O)

### c. Fuses

S. No	Description	Required Qty	Offered Qty	Compliant (Yes/No)	Remarks (if any)
1	DC LED light	1			
2	Fan	1			

## 6. PV Mounting Structure

S. No	Description	Requirement	Offered	Compliant (Yes/No)	Remarks (if any)
1	Structure material	Mild steel			
2	Material Gauge	Gauge 12 or Batter			
3	Wind loading	Mounting system should be able to allow air circulation for cooling in high temperature and withstand wind speed of 150 Km/hour at 3 sec gust			
4	Adjustable mounting structure	Angle adjustment between 14° to 25 °			
5	Material surface protection	Mounting structure should be Galvanized not less than 80 microns in case of hot dip & 30 microns in case of electroplating.			
6	Operation and maintenance	Structure should be accessible for personnel to allow regular cleaning of the solar module			
7	Concrete block weight	30 KG minimum compressed			

## 7. LED Lights

S. No	Description	Requirement	Offered	Compliant (Yes/No)	Remarks (if any)
1	<b>LED Lights Make</b>	Brand should be verifiable - Mention brand & model			
2	Rod/ Blub Type	Aluminum or Ceramic casing (must have better heat dissipation)			
3	Watts	5 Watts or less with lux output not less than 370 on Gonio Photometer			
4	CRI	75 or better			

5	System efficiency	75 lumens/watt or better at nominal.			
		Be designed for lumen maintenance of L70 or 70% at the end of useful life at ambient temperature of 35 deg C			
6	Input voltage	+/- 25 tolerance% of rated voltage			
7	Color Temperature	5000-6500 K			
8	Working Temperature Range	-10°C to +55°C			
9	Life Time	20,000 Hours or more			
10	Beam Angle	120 Degrees			
11	Lens/cover	Frosted			
12	Optics	No discoloration (UV protection) in 5 years of indoor operation, white painted circuit			
13	Thermal Dissipation	Perfect contact between board and housing.			
		Metal Core PCB mounted on housing with highly efficient thermal interface material. Silicon glue must be avoided.			
14	Photometric	Light fittings must be marked with the manufacturer, model number, rated operating voltage, rated current and date of manufacture or batch number			
15	Test Reports form Manufacturers (recommended)	Punjab Energy Efficiency & Conservation Agency (PEECA) specifications			

## 8. DC Ceiling Fan

S. No	Description	Requirement	Offered	Compliant (Yes/No)	Remarks (if any)
1	<b>LED Lights Make</b>	Brand should be verifiable - Mention brand & model			
2	Sweep	1200 mm			
3	Watts	35 Watt			
4		15 % Tolerance in power consumption			
5	RPM(Max)	≥ 280			

6	Air Delivery	~ 150 Cubic Meter / minute			
		~ 10 % tolerance in air delivery			
7	Voltage Range	12 V Application (or as per design)			
8	Winding Wire	99.99 % Pure copper with durable enameled			
9	Body	Metallic body with varnish insulation			
10	Variable speed Controller	Robust button for On/Off/ variable speed operations			
11	Documentation	CE, RoSH, UL / or PSQCA/NEECA compliance			

**Data Sheet for item#1, 2, 3, 4, 7 & 8 must be attached with the technical Note: proposal showing the detailed specifications**

I/We, the undersigned do undertake that the information provided in the compliance sheet is 100% true and we are responsible for any mistake or error. Further we do hereby undertake and certify the following:

1. Batteries supplied for this project would be less than 4 months old from the date of manufacturing.
2. Batteries, charge controller, fan, lights supplied would have 2 years replacement performance warranty from the date of supply/installation/commission of solar system.
3. All the technical requirements/specifications will be 100% fulfilled.
4. All the instructions of as given in the tender documents will be 100% fulfilled.

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Stamp: \_\_\_\_\_

Date: \_\_\_\_\_

### Annexure-III

For every district the following break up of costs of items should be provided as follows: **(SUBMIT SEPARATE COST BREAKUP FOR EACH DISTRICT(s))**

Unit costs and Prices for District _____ Tehsil _____				
Items/description	Unit	Qty	Unit cost (PKR)	Total Cost (PKR)
Solar Panel, 200Wp, A Grade	Pcs	1		
Battery, 45Ah,	Pcs	1		
Charge Controller, 20Amp PWM	Pcs	1		
Enclosure Box	Pcs	1		
Mounting Structure	Pcs	1		
LED lights 5W	Pcs	5		
DC Ceiling Fan	Pcs	1		
Misc. Accessories, Breakers, fuses, jacks, clamps, ducts, switches, cables, stand for enclosure box, cover for bulb installed outer side and nut bolts etc.	Lot	1		
Concrete Blocks	Pcs	4		
Installation and Logistics	Job	1		
Total Cost for each solar PV system				

Sr. No	District	No of Solar PV Systems	Unit Cost (PKR)	Total Cost (PKR)
1	Bahawalpur	121		
2	Bahawalnagar	98		
3	Muzaffargarh	135		
4	Rajanpur	136		
5	Rahim Yar Khan	142		
6	DG Khan	281		
7	Layyah	131		
8	Bhakkar	150		

9	Mianwali	141		
10	Khushab	165		
Total (PKR) inclusive of all Taxes and charges				

Remarks:

1. The cost of each Solar PV system should be inclusive of all the taxes duties, delivery, installation, transportation, testing and commissioning charges.
2. As the payment would be made by the respective community institutions so no taxes would be deducted from payment.
3. A supplier can offer solar PV systems for any one tehsil or more than one tehsils
4. Offered prices or quoted rates should be fixed and valid till December, 2023 from the date of submission

Signature: \_\_\_\_\_

Company: \_\_\_\_\_

Stamp: \_\_\_\_\_

Date: \_\_\_\_\_

**Format for Performance  
Security Form**

To: [ National Rural Support Programme, 26-A, Satellite Town, Bahawalpur  
[on account of \_\_\_\_\_ Community Institutions (CIs)]

WHEREAS [name of Supplier] (hereinafter called "the Supplier") has undertaken, in pursuance of Contract No. [reference number of the contract] dated \_\_\_\_\_ 20\_\_\_\_, awarded by CI \_\_\_\_\_ to supply [description of goods and services] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank/ or insurance guarantee by a reputable bank/ or insurance company for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Supplier a guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of [amount of the guarantee in words and figures], and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limits of [amount of guarantee] as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the \_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

Signature and seal of the Guarantors

\_\_\_\_\_  
[name of bank / or insurance Company (AA rated)]

\_\_\_\_\_  
[address]

\_\_\_\_\_  
[date]

**SATISFACTION CERTIFICATE**

I, the undersigned, Mr. \_\_\_\_\_ with  
permanent address \_\_\_\_\_  
member of \_\_\_\_\_ Community Institution, do hereby  
declare and verify that the **200-Watt Solar System(Household)** provided by Government of  
the Punjab under “Southern Punjab Poverty Alleviation Project (SPPAP-II), Bahawalpur  
“Provided/ installed by M/s \_\_\_\_\_ is complete in all respects and I am fully  
satisfied with the current performance of the system as per design approved by the Project  
Staff/ Social Mobilization Partner (SMP).

Signature/ Thumb Impression: \_\_\_\_\_

Name: \_\_\_\_\_

Fathers Name: \_\_\_\_\_

CNIC No.: \_\_\_\_\_

**SOUTHERN PUNJAB POVERTY ALEATION PROJECT (SPPAP)**

**Bahawalpur, Bahawalnagar, Muzaffargarh, D.G Khan , Rahim  
Yar Khan, Rajanpur, Layyah, Mianwali, Bhakkar & Khushab**

**AGREEMENT FOR INSTALLATION OF 200 WATT SOLAR PV SYSTEM (HOUSEHOLD)**

This agreement is made at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ (month) \_\_\_\_\_ (year)

Infrastructure Specialist/ o r Assistant Director (Agri.), Southern Punjab Poverty Alleviation Project (SPPAP), District: \_\_\_\_\_ (hereinafter referred as the

**“First Party”** which expression shall include the successors, legal representatives & permitted assignees),

**BETWEEN**

**M/s** \_\_\_\_\_, with its registered office at \_\_\_\_\_, which has been awarded a contract by the Third Party for the delivery/ installation of 200 Watt Solar Energy System(Household) (hereinafter called the **“Supplier of the Solar System (SSS)”**, which expression shall include the successors, legal representatives & permitted assignees and referred as **“Second Party”**),

**AND**

\_\_\_\_\_Community Institutions (CIs), through its President/ or Manager Mr. \_\_\_\_\_, duly authorized by resolution dated: \_\_\_\_\_ by the Community Institutions (CIs), having approved solar sub-project by SPPAP (hereinafter called the **“Community Institutions (CIs)”**, which expression shall include the successors, legal representatives & permitted assignees and referred as **“Third Party”**).

**AND**

Project Coordinator/ Programme Officer Engineering, National Rural Support Programme (NRSP), (hereinafter called the **“Social Mobilization Partner (SMP)”**, which expression shall include the successors, legal representatives & permitted assignees and referred as **“Fourth Party”**).

**WHEREAS** the parties have agreed to the following terms and conditions:



## **1. AGREEMENT EFFECTIVENESS AND DURATION**

The Second, Third & Fourth Parties have decided to enter into this agreement with the First Party for provision & installation of 200 Watt Solar Energy System (Household), under the project titled "Southern Punjab Poverty Alleviation Project (SPPAP-II)- Alternate Energy Sub-Component".

This agreement shall come into force immediately after signing by all parties and shall remain enforced up to two (02) calendar years after handing over the system to the Third Party (CI).

## **2. ESTIMATED COST**

The agreed/approved total estimated cost of \_\_\_\_\_ No's of 200 Watt Solar PV Energy System (Household) to be provided/ installed by all members of the Third Party (CI) (as given in the Administrative Approval (AA) bearing No.\_\_\_\_dated:\_\_\_\_by the First Party hereinafter referred to as the

"Total Approved Estimated Cost (TAEC)") is Rs.\_\_\_\_\_ as reflected in **Annexure-XX**.

Out of TAEC, 80% will be provided by the First Party as First Installment, which would be paid in two to three installments to the Second Party against the \_\_Nos. of 200 Watt Solar Energy System (Household).

## **3. MODE OF PAYMENT**

On approval of the scheme and issuance of Administrative Approval by the First Party, The First Party shall provide 80% of its 100% share, by way of Cross Cheque in favor of the Third Party, to be deposited in the Joint Account being jointly operated by the President/ or Manager of the Third Party and Officer designate of the Fourth Party within 10 days of issuance of Administrative Approval (AA) of the scheme.

Furthermore, the Second Party shall provide Performance Guarantee of 5% value of the approved scheme favoring (in the approved format) from any scheduled bank or (AA rated) insurance company in favor of the Third Party (this guaranty must fully to cover installation, appliances, items etc. in all aspect).

The Third Party shall, thereafter, make Payment to the Second Party (SSS) for provision & installation of \_\_\_\_\_ Nos. of 200 Watt Solar Energy System (Household) in the following manner:

### **3.1 First Installment**

Release of First installment of 75% percent of the cost estimate of the \_\_\_\_\_ Nos. of 200 Watt Solar Energy System (Household) by way of Cross Cheque in favor of Second Party on receipt of delivery of the 200 Watt Solar Systems to the Third Party. (as per approved prototype of the 200 Watt Household Solar System and as mentioned in Annexure \_\_\_\_\_ on approved/ agreed standards & specifications)

### **3.2 Second Installment**

After receipt of report of delivery, the First Party would get the systems verified by Technical Committee (TC) of the First Party and after successful report of the Technical Committee, the First Party would release second installment of 25% of its 100% share to the Third Party through Cross Cheque for onward payment to the Second Party after successful Delivery/ Installation of the systems by the eligible members of the Third Party (CI). The Third Party shall confirm the following before making payments to the Second Party;

3.2.1 \_\_\_\_\_ Nos. of 200 Watt Solar Energy System (Household) have successfully been delivered/ tested/ installed as per approved Prototype.

3.2.2 200 Watt Solar Energy Systems (Household) have been commissioned according to satisfaction of the members of CI, the certificate as attached as **Annexure-XX** would be obtained from all the members provided with the solar systems.

3.2.3 The members of CI have obtained necessary/ agreed Guarantees on the letter heads of the Second Party regarding different Components of the solar systems, as agreed with the First Party.

The Third Party would immediately release the remaining balance payment of total estimated cost to the Second Party, however, Second Party shall provide the Bank or insurance guarantee for the period of 2 (two) years.

In case of the Second Party fails to provide envisaged services during the warranty period, the Project Director, SPPAP shall reserve the right to forfeit/ call the Insurance

Guarantee provided by the Second Party. The Third Party shall release the 2% Security Deposit, after 6 months of successful installation of 200 Watt Solar PV Energy System (Household).

#### **Adjustments of Material Prices**

3.4 The Price of the 200 Watt Solar Energy System (Household) shall remain fixed till completion of the SPPAP-II gestation period up to 31<sup>st</sup> December, 2023.

#### **4. COMPLETION TIME, LIQUIDITY DAMAGES AND CONTRACT TERMINATION**

4.1 The Second Party shall shift/ move/ deliver/ install 200 Watt Solar Energy System (Household) to the inspection site of the First Party within two weeks (200 Days) of issuance of the work order.

4.2 The delivery/ installation to the Third Party shall be completed within 7 days after the approval by the Technical Committee (TC) of the First Party.

4.3 The Second Party shall be responsible for timely completion. The time period may, however, be extended in exceptional circumstances, by mutual consent of all the parties in writing and with the approval of Project Director SPPAP.

4.4 If the Second Party commits a major breach of any of the terms & conditions under this Agreement, and does not take appropriate remedial actions as advised by the First Party within fifteen days of such advice, then the First Party may terminate this Agreement. In case of such termination, the Second Party shall refund all payments provided by the Third Party.

4.5 If the Second Party fails to complete the delivery within specified period (30 days) from the date of issuance of work order, liquidity damages shall be applicable. The amount of liquidated damages per day of delay shall be imposed by the First Party. The liquidated damages are set 0.5 percent per day and the maximum limit as 10 percent. However, the second party may be entitled to an extension of the time for completion if and to extent that completion for the purposes is or will be delayed by any of the following causes:

☐☐ A cause of delay giving an entitlement to extension of time of completion by the second party

☐☐ Any delay, impediment or prevention caused by or attributable to the First and/or third party.

If the Second Party considers herself to be entitled to an extension of the Time for Completion, the Second Party shall give a written request to the Project Director, SPPAP for

extension of time before 7 days of expiry of agreed time frame. When determining each extension of time, the PD shall review previous determination and may increase but shall not decrease the total extension of time.

4.6 If the Third Party commits a major breach of any of the terms & conditions under this Agreement, and does not take appropriate actions as advised by the First Party within 7 days of such advice, then the First Party may terminate this Agreement. In case of such termination, the contribution of Third Party as share in system costs shall be seized and shall not be refunded by the First Party.

## **5. Role and Responsibilities of First Party**

- 5.1 Accord Administrative Approval (AA) of the project of the Second Party.
- 5.2 Provide list of eligible/ registered Solar System Suppliers (SSS) along with their rates to the Third Party and also would provide the details of approved specifications of the 200 Watt Solar Energy System (Household).
- 5.3 Make Timely payments to the Third Party so that it could make payments to the Second Party as per the agreement.
- 5.4 Get the 200 Watt Solar Energy System (Household) technically checked by the TC of First Party. Also get one random sample during implementation checked by KICS, UET, Lahore and in case of failure of the sample, the Second Party shall replace all the systems provided in that specs at its own cost.
- 5.5 Arrange and deploy Project staff for spot-checking/ monitoring and Verification of works at different stages.
- 5.6 Mediate between Second and Third Party in case of any dispute.
- 5.7 Complete the delivery on the risk and cost of the Second Party, if Second Party fails to provide/ deliver/ install 200 Watt Solar Energy System (Household) as per agreed timeframe.
- 5.8 Maintain record of all payments made to Third Party from project funds on account of 200 Watt Solar Energy System (Household).

## **6. Duties and Responsibilities of the Second Party**

- 6.1 Motivation of the Third Party through awareness.
- 6.2 Provide 200 Watt Complete Solar PV Energy System (Household) as per approved Prototype by KICS in accordance with accepted/approved standards ensuring the trouble free operation
- 6.3 Supply the 200 Watt Complete Solar PV Energy System (Household) on receipt of

- work order and get it verified from project TC within total agreed period of 15 days.
- 6.4 Deliver/ Install the system within 15 days of the award of work order by the Third Party, as per approved standards and specifications under the project and get its certified from the Third Party.
  - 6.5 Hand over the system to the Third Party in the presence of Fourth Party and submit COs satisfaction certificate (**Annexure-XX**) to the First Party.
  - 6.6 Provide material (in Urdu) to the Third Party on:
    - 6.11.1 Operations of the system.
    - 6.11.2 Handling of the system etc.
  - 6.7 Provision of an operation & maintenance manual to the Third Party in Urdu language along with warranty card of the 200 Watt Household Solar System equipment, if needed at the time of installation/ handing over of the systems.
  - 6.8 Extend after-sale–service free of charge for a period of two years.
  - 6.9 Provide warranty for repair/ replacement of any portion or the entire system component during warranty period due to defects in materials or workmanship. However, in case of any fault/ damage caused to the materials/system due to negligence/overlooking of Third Party, the Third Party will make upfront payment for materials to the Second Party.
  - 6.10 After handing over the scheme to Third Party with certification by TC of the First Party, the Second Party will, however, not be responsible for any theft, fire, natural disaster, misuse animal damage, modification in the installed system without consultation, mishandling or any other unauthorized practice/action by the Third Party.
  - 6.11 Abide by/accept the procedures for imposing the penalties approved under the project (**Annexure-XX**).

## **7. Duties and Responsibilities of Third Party**

- 7.1 Open Joint Bank Account with the representative of Fourth Party, as per procedure within 10 days of issuance of Administrative Approval (AA).
- 7.2 Provide assistance and unrestricted accessibility to the representative of First, Second Parties and Fourth Party at any stage during project period.
- 7.3 Ensure to secure materials supplied by Second Party in safe custody and be held responsible for payment up to the extent of loss, if occurred due to its negligence.
- 7.4 Settle all disputes within the members of the CI as the First and Second Parties would not be involved in such disputes.

- 7.5 Facilitate Second Party for timely completion of system delivery/ installation and be held responsible for any undue delay/ resistance on his part during delivery/ installation of scheme.
- 7.6 Inform the First Party in writing immediately about issues and disputes with Second Party, if arise.
- 7.7 Provide in writing its satisfaction to First and Second Parties on the performance of installed 200 Watt Solar PV Energy System (Household) (**Annexure-XX**).
- 7.8 Arrange to pay the entire cost incurred on system installation to the Second Party, as per details mentioned hereinabove.
- 7.9 Ensure that all the Solar Energy Systems installed in the Project are not removed, replaced and shifted to any other site without the approval of the First Party, failing which the First Party would have the right to recover the total cost of the Solar Energy System from the defaulting CI and its members.

#### **8. Duties and Responsibilities of Fourth Party**

- 8.1. Form CIs and identify their needs, as per the consultancy agreement already executed between CDC (NGO) and the Project.
- 8.2. Form schemes of satisfaction of the needs of the Third Party and submit the same for approval of First Party.
- 8.3. Open Joint Bank Account with the representative of Third Party, as per procedure within 10 days of issuance of Administrative Approval (AA).
- 8.4. Provide assistance and unrestricted accessibility to the representative of First and Second Parties at any stage during project period.
- 8.5. Ensure that the Third Party keeps the materials supplied by Second Party in safe custody and to hold Third Party responsible for payment up to the extent of loss, if occurred due to its negligence.
- 8.6. Facilitate Second Party for timely completion of system delivery/ installation and be held responsible for any undue delay/ resistance on his part during delivery/ installation of scheme.
- 8.7. Inform the First Party through in writing immediately about issues and disputes with Second Party, if arise.
- 8.8. Arrange to pay the entire cost incurred on system installation to the Second

Party, as per details mentioned hereinabove.

#### **9. Acceptable Standards/ Specifications of 200 Watt Household Solar System**

- 9.1. The 200 Watt Household Complete Solar PV System materials/ equipment and workmanship under the project will be according to the acceptable industrial standards/ manufacturer's specifications **(Annexure-XX)** and shall be as per the specifications approved by the project and per the Prototype approved by KICS, UET, Lahore.
- 9.2. The 200 Watt complete Solar Energy System (Household) shall be 100% as per the prototype approved by KICS, UET, Lahore.

#### **10. Settlement of Dispute**

- 10.1. During execution of the scheme, if any dispute arises between Second and Third Party, relating to any aspect of this assignment, the parties shall first attempt to settle the issue through mutual and amicable consultation. However, on request by Second and/ or Third party, the dispute resolution committee constituted by Project Director comprising of I.S, SPPAP, AD(Agri.) Representative of Fourth Party, which would help out both the Parties to resolve the issue. If the same is not resolved through such consultations, the matter will be referred for adjudication to the Project Director, SPPAP, whose decision will be final and binding for all the parties to such dispute, and will not be challengeable in any court of law.
- 10.2. The First Party will not be responsible for any damage, if so, occurred during or after delivery/ installation/ completion of the work, due to natural calamities, mismanagement, negligence or any other reason on the part of Second and Third Parties.
- 10.3. The First Party will also not be responsible for non-functioning of 200 Watt Solar System (Household), due to insufficient sunlight availability or any damage caused by the negligence of Second or Third Parties.

**First Party (I.S/ AD-Agri.):**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Date: \_\_\_\_\_

Official Stamp: \_\_\_\_\_

**Second Party (Solar PV System Provider):**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Date: \_\_\_\_\_

**Third Party (Community Institutions (CIs)):**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Tehsil: \_\_\_\_\_

District: \_\_\_\_\_

Date: \_\_\_\_\_

**Forth Party (Social Mobilization Partner (SMP)):**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Tehsil: \_\_\_\_\_

District: \_\_\_\_\_

Date: \_\_\_\_\_

**WITNESSES**

1. Signature: \_\_\_\_\_

2. Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_



## **UNDERTAKING**

**(To be submitted on at least Rs.100/- stamp paper duly attested by notary public)**

Date:

I, the undersigned representative of M/s..... having its office at

.....

.....

Do hereby affirms that our company/firm/organization is eligible because we;

- Are registered company/firm/organization.
- Are registered with NTN.
- Are not bankrupt or in the process of going bankrupt.
- Have not been convicted for an offense concerning professional conduct.
- Have not been guilty of grave professional misconduct (proven by any means which the contracting authorities can justify).
- Have fulfilled obligations related to payment of taxes.
- Are not guilty of serious misinterpretation in supplying information.
- Are not in situations of conflict of interest (with prior relationship to project or family or business relationship to parties in NRSP)
- Were not declared at serious fault of implementation owing to a breach of their contractual obligations
- Have no relation, direct or indirect, with any terrorist or banned organizations under the provision of Anti money laundering and anti-terrorist financing act of Pakistan.
- Are not on any list of sanctioned parties issued by the Pakistan Government, DIFD, USAID, UN agencies, European Union and others.
- Are not blacklisted by any Local/International organization, Government/semi Government department, NGO or any other company/organization.
- Have no relation, direct or indirect, with proscribed individual/entities/political expose person/s.
- Have not been reported for/under litigation for child abuse and child labor.
- Have never been involved in litigation with any government or private organization in PV line of business.

Declared by:

\_\_\_\_\_  
(Signature)  
(Name)  
(Designation)

Witness:

Signature: -----

Name: -----

CNIC: -----