

# **SECTION-4**

## **Technical & Special Conditions of Contract**

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**Name of Work: Design, Supply, Installation, Testing, Commissioning & provide Warranty Services of 9,347,000 Nos. Solar Home Lighting System for Member Countries of International Solar Alliance (ISA).**

**NIT/Bid Document No.: EESL/06/2020-21/ICB-ISA-SHLS/20216011 Dated: 14.07.2020**

**NOTE: THE TERMS & CONDITIONS STIPULATED HEREIN (I.E., IN SECTION-4) WILL SUPERSEDE ANY CONTRADICTION/SIMILAR/OVERLAPPING TERMS & CONDITIONS IN ANY OTHER SECTION/PART OF THE TENDER.**

**BIDS ARE TO BE SUBMITTED AS FOLLOWS: -**

**Envelope 1, 2 and 3 will appear online in dynamic form. No Manual/Hard Copy of documents need to be submitted for these envelopes apart from below mentioned documents.**

**Envelope 1 (Pre-Qualifying documents) should contain following:**

- a. Bid document fee in the form of Banker's Cheque / Demand Draft/online payment as specified in Section -1. (To be submitted in hard copy/ manually in the tender-box on and before Technical E-Bid Opening Date & Time. Scanned Copy to be uploaded at E-tendering portal.)
- b. Bid Security Fee/Earnest Money Deposit as **Attachment-2** by Online Payment as specified in Section-1. (To be submitted in hard copy/ manually in the tender-box on and before Technical E-Bid Opening Date & Time. Scanned Copy to be uploaded at E-tendering portal)
- c. Letter of the bidder submitting the bid in the form as stipulated in the bid document i.e., as per Bid Form as **Attachment-1** of section - 6, Forms & Procedures. (Scanned Copy to be uploaded at E-tendering portal).
- d. Power of attorney to sign the bid as **Attachment-3** of section 6, Forms & Procedure. Bidders to use their own format. (Scanned Copy to be uploaded at E-tendering portal).
- e. Certificate regarding acceptance of important terms and conditions as per ITB clause 4.6 as **Attachment-4**. Format enclosed in section 6. (Scanned Copy to be uploaded at E-tendering portal).
- f. Form of acceptance of EESL fraud prevention policy and declaration as per **Attachment- 7** of section 6, Forms & Procedure. (Scanned Copy to be uploaded at E-tendering portal)
- g. NEFT/RTGS Bank details as per **Attachment-10** of section-6, forms and procedure. (Scanned Copy to be uploaded at E-tendering portal)
- h. Self-Declaration for not been under temporary suspension or debarment by any Bi / Multi-Lateral Agency/EESL/ISA or its Member Country/Any Agency of country, pursuant to its Anticorruption Policy at company's Letter Head. (Scanned Copy to be uploaded at E-tendering portal).
- i. Consortium agreement (if applicable) on Notarized stamp paper duly signed by bidder and notarized. Bidder to use its own format. (Scanned Copy to be uploaded at E-tendering portal)

**Envelope 2 (Techno commercial Proposal) should contain following:**

- a. Deviation statement as per attachment 5 of section-6, Forms & Procedure.
- b. Techno-commercial bid as indicated in bid document. Documentary evidence regarding bidder's qualifications to perform the contract as required in Qualifying Requirement, Scope of Work, Technical Specifications & Standards etc.
- c. Signed copy of Tender document and subsequent amendments, if any.
- d. Unorganized/Un-labeled Bids may not be evaluated.

**Envelope 3 i.e. Price Bid (to be filled-up online):**

Since the tender is to be carried through e-tendering mode, price bid is to be filled on e-tender portal only and bidders are requested **not to submit the price bid in Hard Copy at EESL along with the documents. The same will not be entertained.**

- a. Price Bid in the format prescribed in the tender document - only for illustration **purpose (prices are to be filled on E-tender portal only).**

**Opening & further processing of the bids:**

Initially, Envelope-I containing the documents (as stated above) will be opened electronically. Envelope-II will be opened electronically on the same day of only those bidders, who have submitted EMD and requisite documents in Envelope-I.

Documents found in Envelope-II shall be scrutinized by EESL w.r.t. the Qualifying Requirements and Bid Evaluation Criteria.

Envelope-III (Price Bid) shall be opened electronically subsequently, subject to acceptance of Techno-Commercial Bid. Price Bid opening date will be intimated to only those bidders, who are found technically & commercially acceptable by EESL.

Price-Bid of the techno-commercially disqualified bidders will not be opened and the EMD submitted by them shall be returned after award of contract to successful bidder(s).

The opened Price Bids shall be evaluated as per the criteria set out in the Tender and the award(s) of Contract shall be recommended accordingly. EMD of the unsuccessful bidders shall be returned after award of contract to successful bidder(s). EMD of the successful bidders shall be returned only on receipt of the CPG by Employer as per the provision of the LOA/Contract (as the case may be).

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# PART

# A: INTRODUCTION AND PROJECT BACKGROUND

## INTRODUCTION

### About ISA

International Solar Alliance (ISA) is the First International and Inter-Governmental Organization of more than 121 Countries having Headquarter in India with United Nations as Strategic Partner. ISA is dedicated to the promotion of solar energy for making solar energy a valuable source of affordable and reliable green and clean energy in more than 121 member countries.

ISA is envisioned as a specialized platform and is working for contributing towards the common goal of increasing utilization and promotion of solar energy and solar applications in its member countries by means of implementing large-scale programs of solar home lighting, solar pumps for farmers etc.

For more details, please visit website [solaralliance.org](http://solaralliance.org)

### About EESL

Energy Efficiency Services Limited (EESL) is a Joint Venture Company of Ministry of Power, Government of India. EESL is successfully facilitating the implementation of energy efficiency projects across India and Abroad. EESL has been executed large-scale energy efficiency projects in India for ex. EESL's domestic efficient lighting program UJALA and LED streetlight program SLNP have been a huge success and has received appreciation from different parts of the world.

EESL has been executing similar kind of projects for ex. Agricultural Demand Side Management (AgDSM) program, had successfully implemented in the state of Andhra Pradesh, Rajasthan and Maharashtra.

For more details, please visit website [eeslindia.org](http://eeslindia.org)

### About the Project

To Provide energy access to 1 Billion populations without electricity, ISA plans to facilitate the provision of Solar Home Lighting System with different configurations. The standards to be used for solar home lighting have been fixed as **ANNEX-A**.

To facilitate this, ISA shall explore the price of the Solar Home Lighting system for ISA Member Countries. EESL shall help ISA in exploring the price band in different ISA member countries.

# PART QUALIFICATION REQUIREMENT

# B:

**Annex-B to be referred for Eligibility & Qualifying Requirement**

Specific confirmation from the vendor as described below shall also be solicited:

<b>SPECIFIC CONFIRMATION BY VENDOR</b>		
<b>Note: Please submit the below table duly filled, signed and stamped along with your Un-Priced Techno-Commercial bid</b>		
<b>Sl. No</b>	<b>Description</b>	<b>Remarks</b>
<b>1.</b>	Bidders should have financial and technical capabilities to execute the Scope of Work as specified in the TENDER DOCUMENT.	Vendor to give their acceptance along with supporting documents
<b>2.</b>	For the purpose of this tender, successful bidder needs to provide name, address, mobile no., email addresses, designations of at least 3 Senior Nodal Officers (Regular Employees of their organization), nominated by their top management (Director/ MD/ CEO), who are reachable through any means of modern communication and who shall be accountable to deliver the products and associated services to Employer as per the tender.	To be indicated
<b>3.</b>	Bidder should either have an existing Project Office/Regional office/depot store or has to set-up a Project Office/Depot Stores in each Member Country within 4 weeks from the date of LoA. Each Project Office/Regional office/depot store should have requisite number of staff members such as Regional Manager/ Stores; Logistics/ Stores Accountant; Service Coordinator directly responsible for fulfilling warranty redemptions Also, Project Office/Regional office/depot store should be equipped with electronic devices to have direct access through email, phones, printer etc. for the purpose of communication during contract period.	Details of service support network or plans for deployment of such network in project area to be provided.
<b>4.</b>	Employer reserve the right for quantity variation up to +/- 20% of total BOQ. Further <b>Employer</b> reserve the right to place a repeat order in case of urgency for part quantity in the Letter of Award for similar work on same prices, terms and conditions.	Agreed
<b>5.</b>	Employer reserves the right to inspect the Works of the bidder to assess Manufacturing Capacity, Quality Assurance Systems, input components and raw material quality along with finished product performance testing during either pre-bid stage or post award.	Agreed



# PART C: SCOPE OF WORK

## 1.1 SCOPE OF WORK

1. Employer may choose to opt for any 1 (ONE) of the following service from Successful Bidder(s):
  - a. Service 1: Supply & testing of complete system at Employer's port
  - b. Service 2: Supply Custom clearance, Local transportation, installation, testing and commissioning of complete system at site
2. Successful Bidder(s) will have full responsibility for packaging, forwarding, transportation, supply and any type of breakages / losses etc. thereto. The goods / systems will be delivered at the Destination ISA Member countries; along with 05 years' warranty service
3. **The supplied materials should be strictly as per specifications mentioned in the Tender Document / Bid as specified in Annex-1**, otherwise it shall be liable for rejection. In case any defective material or any type of substandard material is supplied, the material will be rejected and it will be the responsibility of the Bidder for taking back the rejected materials at its own cost within fifteen days from the date of communication of rejection. Employer shall not be responsible for security/safety of the materials rejected. Any type of fittings, accessories, assemblies, essentially required components, which are not described or mentioned in Tender documents, shall have to be supplied by the Bidder as per IEC Standards & Practices as applicable at bidders own cost.
4. Warranty shall be applicable for 05 years covering all manufacturing defects and performance as per specifications mentioned in the Bid Document.
5. Defective materials will not be accepted under any conditions and shall be rejected outright without compensation. The Bidder shall be liable for any loss/damage sustained by Employer due to defective work. The Bidder shall replace the defective material at its own expenses to the satisfaction of Employer. The Bidder shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of the materials.
6. The Bidder shall not transfer the contract or any part thereof to any party without the prior express consent of the Employer. In the event of Bidder contravening this condition, Employer shall be entitled to place the Contract elsewhere on the Bidder's risk and cost and the Bidder shall be liable for any loss or damage, which Employer may sustain due to the consequences arising out of such replacing of the Contract.
7. In the event of any of the breach of the conditions of the contract at any time on the part of the Bidder, the contract may be terminated by the competent authority of Employer without any compensation to the Bidder. All Payments due shall be forfeited.
8. Bidder shall engrave the address, telephone nos. of the LOCAL local service centre HELPLINE NUMBER on the products supplied at easy to identify locations so that consumer may easily contact local service centre during any breakdown or related condition.
9. An Operation and Maintenance Manual, in Regional language wherein system will be supplied, should be provided with the system. The manual should have information about Solar PV Module, Battery, LED Luminaire, DC Fan, Port for Radio & TV, USB Charging, It should also have clear instructions about mounting of PV module, DO's and DONT's and on regular maintenance and troubleshooting system. Name and address of the person or Centre to be contacted in case of failure or complaint should also be provided.

10. A warranty card for the installed system should also be provided to the beneficiary.
11. Further, a certificate will have to be provided by the Bidder, from any license holder Bidder / supervisor, certifying that all electrical works are carried out in accordance with applicable electrical safety standards prescribed by local government from time to time.
12. Training the user for operation and preventive maintenance of the system is covered under the scope of Bidder. The responsibility of imparting training to beneficiaries of the systems (free of charge), ensuring after sales services and availability of spares at a nearby suitable place / places will rest with the Bidder. The bidder shall have responsibility of providing training in each province of project implementation through a 3-days workshop. Employer can invite upon select beneficiaries in these workshop. Training to be provided for routine operation and maintenance & troubleshooting steps in case of occurrence of fault. The bidder is required to submit certificate of training to the local technicians with a copy to Employer

**Warranty Service: (Applicable in Service 2)**

- a) It is mandatory on the part of Successful Bidder(s) (SB) for providing post installation warranty services through setting up of one Service center for each 100 nos. Systems installed in the Province
- b) Warranty shall be applicable for 05 years in case of Solar PV module, 05 years in case of DC Fan, 05 years in case of LED Luminaire, 05 years in case of Battery, 05 years in case of Balance of Material;
- c) It shall be the responsibility of the SB to ensure 100% working status during the five year (warranty CMC period)
- d) The Bidder will have to arrange all required instruments, tools, spares, trained manpower and other necessary facilities at service center and shall repair/replace all defective component.
- e) Breakdown/Corrective maintenance: Whenever a complaint is lodged by the user/Employer, the Bidder shall attend to the same in such a way that the problem is resolved in \_\_\_\_ hours in case of Solar PV module, \_\_\_\_ hours in case of DC Fan, \_\_\_\_ hours in case of LED Luminaire, \_\_\_\_ hours in case of Battery, \_\_\_\_ hours in case of Balance of Material; from the date of receipt of complaint from beneficiary/Employer/ISA or other relevant competent authority.
- f) It is mandatory that the Bidder shall submit a certificate, about the rectification/replacement work done, signed by the concerned beneficiary(s), to the Employer failing which it will be assumed that the Bidder has not performed its duties & action will be taken as per terms & conditions of the TENDER DOCUMENT.
- g) If the bidder fails to repair the systems against the complaint of breakdown to ensure working status during the warranty period, then such repairs and maintenance shall be done by Employer at the risk and cost of the Bidder and all such expenses shall be recoverable from the Bidder.
- k) PENALTY: If the firm fails to repair/replace the defective system, penalty @ 0.1% of the system cost per day (subject to maximum of 10% of the cost of component) after expiry of timelines as mentioned in e) above is over.

## 2. Technical Specifications; Test Reports & Certificates

For Technical Specifications; Test Reports & Certificates of Material to be supplied, please refer Annex-A of Sec-4

## 3. TESTING AND CHECKING

- 3.1 Employer or its authorized agency (ies) may conduct Pre-Dispatch Inspection upon manufacturing of the Solar Home Lighting System for physical & performance test verification
- 3.2 EMPLOYER or its appointed agency(ies) may reject the lot based upon the Pre-Dispatch Inspection report submitted by appointed PDI inspector(s)
- 3.3 EMPLOYER or its appointed agency(ies) may pick up samples of system components and associated components upon manufacturing for check testing at NABL, IEC, ILAC or independent equivalent certified / accredited laboratories
- 3.4 The selected bidder(s) may dispatch the lot of the solar home lighting system by the time check-testing report is received from the laboratory, but, if the report fails or does not conform to the standards laid out above, then the selected bidder(s) shall have to revoke the lot. In case the systems are already installed at site, the Selected Bidder(s) has to dismantle and replace the system with newer lot of the solar home lighting system at its own cost
- 3.5 EMPLOYER or its selected agency (ies) will bear the costs related to check-testing

# PART D: BILL OF QUANTITY

**BILL OF QUANTITY (BOQ)**

Below mentioned Bill of Quantity (BOQ) is tentative only. Detail BOQ and exact place of delivery (i.e. respective member country, shall be notified separately)

S. No.	Name of the Country	Indicative Demand for Number of Solar Home Lighting System			Total Demand(Nos.)
		Config-1	Config-2	Config-3	
1	Burundi	75000	49500	25500	1,50,000
2	Benin	60000	39600	20400	1,20,000
3	Burkina Faso	110000	72600	37400	2,20,000
4	Bangladesh	300000	198000	102000	6,00,000
5	Cote d Ivoire	65000	42900	22100	1,30,000
6	Cameroon	65000	42900	22100	1,30,000
7	Comoros	6500	4290	2210	13,000
8	Chad	95000	62700	32300	1,90,000
9	Democratic Republic of Congo	525000	346500	178500	10,50,000
10	Cuba	6500	4290	2210	13,000
11	Djibouti	6500	4290	2210	13,000
12	Ethiopia	400000	264000	136000	8,00,000
13	Equatorial Guinea	6500	4290	2210	13,000
14	Ghana	30000	19800	10200	60,000
15	Gambia	6500	4290	2210	13,000
16	Guinea	75000	49500	25500	1,50,000
17	Gabon	6500	4290	2210	13,000
18	Haiti	50000	33000	17000	1,00,000
19	Jamaica	6500	4290	2210	13,000
20	Mali	80000	52800	27200	1,60,000
21	Myanmar	160000	105600	54400	3,20,000
22	Madagascar	140000	92400	47600	2,80,000
23	Malawi	115000	75900	39100	2,30,000
24	Mozambique	150000	99000	51000	3,00,000
25	Namibia	2500	1650	850	5,000
26	Niger	170000	112200	57800	3,40,000
27	Nigeria	550000	363000	187000	11,00,000
28	Peru	10000	6600	3400	20,000
29	Rwanda	60000	39600	20400	1,20,000
30	Senegal	45000	29700	15300	90,000
31	Sao Tome and Principe	6500	4290	2210	13,000
32	Somalia	65000	42900	22100	1,30,000
33	South Sudan	95000	62700	32300	1,90,000
34	Sudan	165000	108900	56100	3,30,000

35	Togo	35000	23100	11900	70,000
36	Tanzania	270000	178200	91800	5,40,000
37	Uganda	245000	161700	83300	4,90,000
38	Venezuela	6500	4290	2210	13,000
39	Argentina	6500	4290	2210	13,000
40	Brazil	6500	4290	2210	13,000
41	Botswana	6500	4290	2210	13,000
42	Cambodia	45000	29700	15300	90,000
43	Cape Verde	6500	4290	2210	13,000
44	Dominican Republic	6500	4290	2210	13,000
45	Eritrea	30000	19800	10200	60,000
46	Guinea-Bissau	10000	6600	3400	20,000
47	Liberia	30000	19800	10200	60,000
48	Yemen	100000	66000	34000	2,00,000
49	Zambia	80000	52800	27200	1,60,000
50	Zimbabwe	80000	52800	27200	1,60,000
					<b>93,47,000</b>
	<b>TOTAL</b>	<b>4673500</b>	<b>3084510</b>	<b>1588990</b>	<b>9,347,000</b>

Further, the competent authority reserves the right to change the location of delivery within a member country, with variation in quantity as specified in BOQ and no charges shall be payable extra in that case.

EMPLOYER reserves the right for quantity variation up to +/-20%. Further, EMPLOYER reserve the right to place a repeat order in case of urgency for part quantity in the Letter of Award for similar work on same prices, terms and conditions. Also, EMPLOYER reserve the right to ask the successful bidder to deliver the part quantity placed on them in any of the member country on same prices, terms and conditions.

# PART E: SPECIAL CONDITIONS OF CONTRACT



## SPECIAL CONDITIONS OF CONTRACT

### SPECIAL CONDITIONS WILL PREVAIL UPON THE INSTRUCTION TO BIDDERS AND OTHER TERMS AND CONDITIONS

#### Bid Prices:

All items in the Schedule of Supply must be listed and priced separately in the Price Schedules. If a Price Schedule shows, items listed but not priced, their prices shall be assumed to be included in the prices of other items.

1. **Taxes and Duties** (a) Refer Price Bid table for considerations to be taken for this.
2. **Insurance:** The Goods supplied under the Contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage, delivery. In case Employer opts for Service-2, for delivery of goods at site, the insurance shall be obtained by the Bidder, for an amount not less than the Contract Price of the goods from “warehouse to warehouse” (final destinations) on “All Risks” basis including War risks and strikes. This shall include insurance during the entire contract period against natural calamities and theft. However, in case of Service-1, successful Bidder(s) has to obtain insurance till the port of destination.
3. **Transportation, storage, Demurrage/Wharfage, Etc.** (applicable in case of Service 2): Bidder is required under the Contract to transport the Goods to place of destination defined as Site and storage of the material till the same are installed at various locations. Transport to such place of destination in the respective Member Country including insurance, as shall be specified in the Contract, shall be arranged by the Successful Bidder, and the related cost shall be included in the Contract Price.
4. **Forex Gain/Losses:** Any foreign currency gain/losses shall be borne by bidder. Bidders may take suitable action to hedge/cover the fluctuation risk.”
5. If it is found that the materials supplied by successful bidder(s) are not of the right quality or not in accordance with tender specifications or received in damaged or broken conditions, Employer shall be entitled to reject the materials, and buy its requirement from the open market / other sources and recover the loss, if any, from the supplier reserving to ourselves the right to forfeit the security deposit, furnished by the supplier against the contract. The supplier will make its own arrangements to remove the rejected material within a fortnight of instruction to do so. Thereafter material will lie entirely at the supplier’s risk and responsibility and storage charges, along with any other charges applicable, will be recoverable from the supplier.
6. Successful bidder is to ensure interchangeability of its product supplied for replacement during warranty and maintenance period and even when it is purchased from open market. In case due to change in technology, the supplied product is not available during warranty period than the improved version of product can be used in warranty with same or improved technical parameters or the combination thereof after written communication of Engineer in Charge at same cost & terms and conditions. Successful Bidder, on whom letter of award has been placed, has also to confirm that the prices of improved version of product is not lesser than the original product or its parts in comparison.
7. **Change of target locations/Quantities within the ISA member country:** Employer reserves the right to change the target locations/Quantities within the country, in case of exigencies, with variation in quantities subject to the relevant clauses under BOQ, as specified under BOQ and no charges shall be payable extra in such a case. Employer is also at liberty to transfer quantities inter-state on need

**basis and only additional transportation, with prior Employer approval, on actual bill submission will be paid.**

8. Bidder should not have been under temporary suspension or debarment by any Bi / Multi-Lateral Agency/EESL/ISA or its Member Country/Any Agency of country, pursuant to its Anticorruption Policy, A bid from such a firm will be rejected. If at any stage of tendering process or during the currency of the contract, any suppression / falsification of such information is brought to the knowledge, Employer shall have the right to reject the proposal or terminate the contract, as the case may be, without any compensation to the tenderer & forfeiture of bid security/EMD/CPG.

**4. Bill of Quantity (BOQ) :**

- i. BILL OF QUANTITY (BOQ) IS BROUGHT OUT UNDER Part D of this document
- ii. The BOQ for the SHLS to be replaced provided in the Tender Document is indicative. BOQ as per TENDER DOCUMENT shall form the basis for evaluation of Price Bids and shall constitute LOA Quantity.
- iii. Employer reserves the right for variation in BOQ up to +/-20%. Prices as per LOA shall be applicable for the revised quantity within the limits of variation specified.

**5. Completion period and Supply schedule**

- The entire delivery of all the indented quantity shall be provided in 120 days from the date of issuance of indent/supply order

Supply of Solar Home Lighting system including supply of items specified in Annex-1 to port/destination within manufacturer's country	90 days from placement of LoA
Supply of Solar Home Lighting system including supply of items specified in Annex-1 to port/destination for destination country port	120 days from placement of LoA
Supply, Custom clearance, Local transportation, Installation & Commissioning	It will be as per directions from Employer

- Supply, of SHLS should be within the specified supply schedule as vetted by EIC for the particular state irrespective of the number of lots/cluster contracted /awarded to the bidder.

**All Supplies are to be completed as per the above-mentioned schedule for respective bidder. Further, in case a party is not able to supply quantity allocated to them as per scheduled timelines due to events beyond the control of the bidder then Employer may consider the bidder's request for time extension citing valid reasons in support of the same & thereof exempting relevant penalties. In absence of the same, Employer reserves the right to shift the part/full quantity to other bidder, who has matched the price.**

**If any other unforeseen situation/s arise apart from those mentioned above, decision of Employer shall be binding on the Bidders.**

**6. EESL reserves the right to disqualify the bidder from participating in the subsequent tenders based on the performance rating as assessed by EIC.**

**Note: For International Bids, equivalent applicable International Standards shall be complied by the Bidder as per the prevalent standards in the country. It is obligatory on the bidder to submit signed & stamped copy all necessary documents as asked in the Tender Document & against the compliance of its clauses at the time of Bid submission or LoA issuance as applicable. In absence of the same, the bid shall be considered incomplete & is liable to be cancelled/rejected. Price basis : The supplier is responsible for supply of SHLS within stipulated time frame.**

**The currency of the Bid shall be US Dollars (\$)**

- **Cost of related service:** Refer Responsibility Matrix of Price Bid Table

**7. Contract Performance Bank Guarantee(CPG):**

Within 28 (Twenty-Eight) days of the receipt of notification of award from EMPLOYER, the successful bidder shall furnish the CPG in the form of Demand Draft/ Pay Order or Bank Guarantee for 10% of the total contract value.

The Bank Guarantee must be valid to cover Delivery Period + Warrantee Period + Three Months Claim Period. Any delay in submission of SD/CPG shall be deemed as accruing of financial benefit to the supplier and EMPLOYER may take necessary interest penalty recovery action (interest @ Libor rate + 2 %) from the payments due to the supplier for the period of delay. However, this provision does not bind EMPLOYER in any way from proceeding against the supplier (including forfeiture of EMD, cancellation of the empanelment/LOA, etc.) for non-compliance towards non-submission of the SD/CPG.

In case Bidder provides CPG for shorter duration, it shall be for a minimum period of 3.5 years and EMPLOYER reserves right to invoke CPG in case extended CPG/fresh CPG is not furnished at least 90 days prior to expiry of original CPG.

Bank guarantee shall be from any bank as per list given in Section 6. EMPLOYER shall at its discretion have recourse to the said Bank Guarantee for the recovery of any or all amount due from the bidder in connection with the contract including of guarantee obligations. This shall include the recovery, if any, against the Penalties applicable during CMC period as brought out under Clause \*\* under Liquidated Damages.

The Performance Security shall be denominated in the currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the SCC, or in another form acceptable to the Purchaser.

Failure of the Successful Bidder to comply with the requirements of IFB/Tender Document shall constitute sufficient grounds for the annulment of the award and forfeiture of the Contract Performance Guarantee.

If any shortfall in performance is observed, as per the criteria mentioned in section 4, EMPLOYER shall have right to INVOKE BANK GUARANTEE.

In case of non-submission of CPG by bidder during the period of supply, EMPLOYER reserves the right to withhold an amount equivalent to the amount covered under CPG till the submission of CPG and acceptance of the same by EMPLOYER after due verification.

**8. Payment Terms:**

Following documents shall be required to be submitted to Employer or designated Financial Agency for executing the necessary payment to the bidder(s):

- a. Signed Invoice in original (Two Copies)
- b. One Negotiable and one Non-negotiable copy of Bill of Lading dated not later than expiry date of Letter of Credit
- c. Packing List
- d. Certificate of Origin [Country of Origin]
- e. Test Reports as specified in Annex- A of Sec-4
- f. Warranty Certificate
- g. Certificate of Insurance.
- h. Certificate from Employer regarding acceptance of Contract Performance Bank Guarantee submitted by successful bidder & signing of Contract Agreement.
- i. Certificate in two copies to the effect that total amount claimed does not include any Commission payable to your Agents in respective Employer country.
- j. Phytosanitary Certificate in case of wooden packing (if applicable only).

Upon submission of the above documents, following terms of payment shall be established between Employer & Bidder:

Component	If Member Country opts for Service 1	If Member Country opts for Service 2
<b>Part A of Price Bid</b>	<b>Upon Delivery of goods at Destination Country' Port :</b> <ul style="list-style-type: none"> <li>70% Payment (Part A + Part B of Price Bid Table) of Total Contract Price will be made through confirmed and Irrevocable Letter of Credit on submission of the above documents.</li> </ul>	<b>Upon Delivery of goods at Destination Country' Port :</b> <ul style="list-style-type: none"> <li>70% Payment (Part A + Part B of Price Bid Table) of Total Contract Price will be made through confirmed and Irrevocable Letter of Credit on submission of the above documents</li> </ul>
<b>Part B of Price Bid</b>	<ul style="list-style-type: none"> <li>20% Payment shall be payable upon successful commissioning of the system or 2 months, whichever is earlier</li> <li>Balance 10 % of payment shall be payable over a period 5(Warranty) years in following manner: <ul style="list-style-type: none"> <li>A. 5% at the end of three years (03) Warranty</li> <li>B. 5% at the end of five years (05) Warranty</li> </ul> </li> </ul>	
<b>Part C of Price Bid</b>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>Upon successful commissioning of minimum 20% indented ordered quantity Remaining 20% of (Part A + Part B)</li> </ul>

		<ul style="list-style-type: none"> <li>Balance 10 % of payment shall be paid over a period 5(Warranty) years following manner:               <ol style="list-style-type: none"> <li>5% at the end of three years (03) Warranty</li> <li>5% at the end of five years (05) Warranty</li> </ol> </li> <li>100% payment of Part C of the quantity Commissioned.</li> </ul>
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Note:

- All Bank Charges of Purchaser's Bankers (Banker shall be an International Bank) shall be borne by the Purchaser and that of Seller's Bankers shall be borne by the Seller.
- If the validity of Letter of Credit is required to be got extended for reasons for which the Purchaser is not responsible, then the Bank Commission for such extensions of Letter of Credit shall be borne by the beneficiary.

Under Price Bid table, bidder needs to ensure that Part C is atleast 10% of Part A. Otherwise, Employer reserves the right to adjust the rates of Part A accordingly to ensure the above criteria is met.

It is recommended that bidder shall refer to Responsibility matrix as mentioned in Price Bid Table of this Bidding Document in order to understand various responsibilities and considerations to be taken with reference to the Parts defined in Price Bid Table.

#### **9. Penalties and Liquidated Damages:**

- In case of any delay in the execution of the SUPPLIES, beyond the stipulated time schedule, EMPLOYER reserves the right to recover from the bidder a sum equivalent to 0.5% of the value of the delayed equipment installation/unexecuted portion of work for each week of delay and part thereof subject to a maximum of 10% of the total value of the contract. However, the LD will not be applicable for the period if delay is not on bidder's part.
- Alternatively, Employer reserves the right to purchase and distribute equipment/ material from elsewhere at the sole risk and cost of the successful bidder/Bidder and recover all such extra cost incurred by EMPLOYER in procuring the material from resources available including EMD/Bid Security/encashment of Bank Guarantee or any other sources etc.
- And also, Employer reserves the right to cancel the order completely or partly without any prejudice to the exercise of the actions under Clauses 'a' and 'b' above.

**The supply schedule committed by vendor during the initial phase should be complied by vendor and failing to which will lead to requisite penalty as per the powers of EMPLOYER.**

#### **10. Project Management:**

- Bidder shall plan and is required to carry out activities simultaneously across various Cluster/State to achieve the completion period and implementation schedule as specified under Clause 4.

#### **ii. Appointment of NODAL Officer by Successful Bidder:**

For the purpose of this tender, successful bidder needs to provide name, address, mobile no., email addresses, designations of at least 3 Senior Nodal Officers (Regular Employees of their organization), nominated by their top management (Director/ MD/ CEO), who are reachable through any means of modern communication and who shall be accountable to deliver the products and associated services to EMPLOYER as per the tender.

iii. **Correspondence:** Post award, all correspondence by successful bidder shall be addressed to as brought out below:

- **Employer's Procurement Head (Procurement)** – for all issues pertaining to clarifications w.r.t contractual and commercial issues or requiring amendments on the terms and conditions of LOA in general.
- **Engineer-In-Charge (EIC)** - all the activities pertaining to execution of the works at site, as per the provisions under the terms of the LOA.

iv. **Appointment of NODAL Officer by Successful Bidder:**

Successful bidder shall intimate the details of NODAL Officer, within one week of issue of LOA, who shall be the single point contact from their side for all communications (technical as well as contractual). EMPLOYER also shall intimate the details of Engineering In-charge (EIC) who shall coordinate all the activities from the side of EMPLOYER.

**11. Compliance with all Statutory Regulations:**

- a. Compliance of all the statutory requirements as may be required w.r.t the activities to be performed to execute the scope of work under the subject LOA including the requirements under Contract Labor Acts, safety of the workmen deployed, etc., shall be the responsibility of the successful bidder including all the expenditure incurred for the same. This includes all the requirements w.r.t the workmen under Sub-Bidder(s) also. The successful bidder shall submit the documentation to EMPLOYER, on monthly basis, as required under the applicable statutory requirements.
- b. Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc. Successful bidder shall indemnify EMPLOYER for any accident, injury met by its labor, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement solely. EMPLOYER has no role to play in this matter.

**12. Submission of Reports:**

The successful bidder shall submit following Reports, as per the instructions of EIC:

- a. **Spares Inventory** – Weekly Report on Stock of spares required for prompt service.
- b. **Any other Reports as may be directed by EIC**

Final Report Formats shall be informed by EIC at appropriate stage.

**13. Documentation:**

File names of all the documents submitted in soft form shall contain the topic of the subject document.

**14. Evaluation Criterion:**

- Techno-commercially suitable bidders having the lowest price as specified in price bid shall be considered as L-1.
- The evaluation to discover L-1 bidder shall be Bottom Total of all the Part (A+B) & Part (A+B+C) of Price Bid Table for both the service 1 & Service 2.
- In view of the large tender quantity, ISA/Member Country reserves the right to split the total order quantity amongst more than one supplier OR to award it to single successful bidder. The allocation of quantity among bidders other than L-1 (who matches the L-1 price) shall

be based on the price bid hierarchy, i.e. L1, L2, L3.....and so on subject to matching the L-1 price for complete scope of work. In case the complete quantity is not covered as per the above-proposed arrangement, then the original hierarchy shall be taken into consideration. The award to L2, L3 and so on shall be subject to their acceptance of L1 rates with all other terms and conditions as per tender.

- The distribution pattern for splitting the order in all or price-bid as deemed suitable at matched rate will be as indicated below.

In case of Distribution between	Ratio in percentage
Two Parties (L1:L2)	60%:40%
Three Parties (L1 : L2 : L3)	50% : 30% : 20%
Four Parties (L1:L2:L3:L4)	40%:30%:20%:10%
Five Parties (L1:L2:L3:L4:L5)	30%:25%:20%:15%:10%

The above percentage will be subject to variation at ISA/Employer's sole option under the following circumstances; -

- Total maximum quantity offered at matched rate by the vendors is less than the required quantity.
  - Quantity offered by the vendor for matching is less than percentage given above as per hierarchy.
  - Further, in case a party is not able to supply quantity allocated to them as per scheduled timelines, ISA/Employer reserves the right to shift the part/full quantity to other bidder, who has matched the price.
- If total quantity offered by the parties (at matched rate) is less than the total required quantity, Employer at its sole option can increase the no. of parties.
  - Please note that in all cases Matching of Prices will be on total landed cost for complete scope of work.
  - It will be the sole discretion of Employer to award the quantity irrespective of the quantity mentioned by the bidder. Employer reserves the right to divert the awarded quantity of successful bidder if the bidder does not perform within first two weeks as per the schedule.



**15. Pre-bid conference**

A pre-bid conference shall be held on 06<sup>th</sup> Aug 2020 at 15:00 Hrs(IST) at ISA Headquarters, Gurugram. Address: Surya Bhawan, NISE Campus, Gwal Pahari, Gurugram, Haryana – 122003, India

Pre-bid conference shall also held on above date and time through video-conferencing, interested bidders may participate in the pre-bid through video-conferencing. (Video conferencing user id and password will be shared on EESL/ISA website later on).

The clarification/amendment emerging from the pre-bid conference, shall be published based on approval of ISA.

*(Only two persons from the bidder's company shall be allowed to participate in the meeting. Bidders are requested to send their confirmation for participating in the meeting 48 hours before the date/time of meeting along with the details of person (name, designation, contact details) identified for attending the meeting, failing which he/she shall not be allowed to participate. Bidders are requested to send their queries at least 3 days before the schedule date of conference.)*

Bidders are requested to submit the queries (in below format), two days prior to the scheduled pre-bid conference

Name of Tenderer				
Tender No.				
Tender ID				
Bid Opening Date				
Sr.No.	Section No.	Description as per RFP	Queries/ Clarification of the bidder	Remarks
	Page No.			
	Para No./Clause No.			
1	Section No.			
	Page No.			
	Para No./Clause No.			
2	Section No.			
	Page No.			
	Para No./Clause No.			
3	Section No.			
	Page No.			
	Para No./Clause No.			

**16. Arbitration:**

Arbitration shall be carried out as per ICC (International Chamber Commerce).

- 17.** The Bidder shall be deemed to have examined the Bid document, to have obtained its own information in all matters whatsoever that might affect carrying out the Works in line with the Technical specifications and Scope of Work specified in the document at the offered rates and to have satisfied himself to the sufficiency of its Bid. The bidder shall be deemed to know the scope, nature and magnitude of the work



and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works he has to complete in accordance with the Bid documents irrespective of any defects, omissions or errors that may be found in the Bid documents.

#### 18. Cost of tender Documents:

Interested bidders may view the tender documents at <https://eesl.eproc.in> or could be viewed after following the link of 'e-Tendering' on EESL home page, i.e. <http://eeslindia.org> from where the registered vendors [registration process is explained at EESL home page in "E-tendering" section] with EESL will be able to download the tender documents and submit their bids online.

The cost of tender documents is USD 400 (Rupees Twenty-Five Thousand only or four hundred US dollar -Nonrefundable and Non Adjustable) which shall be payable as per details mentioned in Section-1

The tender submission, tender closing and opening will be done electronically and online.

EESL will not be responsible for any delay, loss or non-receipt of Tender Document Cost sent by post/courier. The instrument should reach in original to EESL office before the Bid Opening date. Bids not accompanied with the requisite tender document cost may not be opened.

#### 19. Bid Security/Earnest Money Deposit (EMD):

As per section-1

The bidder shall furnish, as part of its bid, a bid security in a separate envelope. The bid security shall, at the bidder's option, be in the form of a Online Payment as per Section 1 of this Tender Document. Bid security/EMD shall remain valid for a period of 45 days beyond the original bid validity period of 180 days, i.e. 225 days from date of bid opening. If there is any extension in bid validity period, then EESL may ask the bidder to extend the validity of bid security.

The details of EMD instrument has to be submitted in relevant field/column of online module. Tenders without Earnest Money Deposit is liable to be rejected. It should be ensured by the vendor that the EMD is received by EESL before opening time of techno-commercial bids for verification of the details of online payment details and confirmation as per Section-1 given by the vendors.

The tender submission, tender closing and opening will be done electronically and online.

Bids not accompanied with the requisite tender document cost may not be opened.

The bid securities of unsuccessful bidders will be returned as promptly as possible after the award is made to lowest evaluated technically acceptable bidder.

The bid security of the successful bidder will be returned when the bidder has signed the contract agreement, and has furnished the required performance security.

The bid security may be forfeited if:

- a. If the bidder withdraws its bid during the period of bid validity as specified in the bid.
- b. If the bidder does not accept computational/arithmetical error correction made by EESL and as explained in "Financial Evaluation" section of the Bid/ Tender Document document.
- c. If the bidder does not accept assumptions, estimations etc. used for evaluation of bids as specified by EESL in tender documents and revision of its bid accordingly, in case other assumptions are used. If the bidder does not accept the sharing as specified in the bid.
- d. If the Bidder refuses to withdraw, without any cost to the EESL, any deviation not listed in Attachment 5 but found elsewhere in the bid; or
- e. In the case of successful bidder, if the bidder fails within the specified time limit:

- To sign the contract agreement within 15 days of placement of LoI/Award letter.
- To furnish the required performance guarantee, in accordance with the tender document.

## **20. Period of Validity of Bid**

Bids shall remain valid for a period of 180 days after the closing date prescribed by the EESL for the receipt of bids. A bid valid for a shorter period may be rejected by the EESL/Employer as being non-responsive. In exceptional circumstances, the EESL/Employer may solicit the bidder's consent to an extension of the bid validity period. The request and response thereto shall be made in writing through letters/ e-mails. If the bidder accepts to prolong the period of validity, the bid security/EMD shall also be suitably extended. A bidder may refuse the request for Bid Validity Extension without forfeiting its bid security. A bidder granting the request will not be required nor permitted to modify its bid.

# PART F: PRICE BID

## <refer Excel File>

## ANNEX-A: Options in Solar Home Lighting Systems proposed by ISA for Member Countries

Particulars	Config-1	Config-2	Config-3
Solar PV Module	<b>100 Watt</b>	<b>200 Watt</b>	<b>300 Watt</b>
<b>Battery</b> with Provision of Charge Controller	12.8 Volt 30 Ah LiFePo4 Charge Controller with MPPT Technology and compatible with LiFePo4 battery, 12/24 Volt Automatic Selection, 15 A capacity,	12.8 Volt 60 Ah LiFePo4 Charge Controller with MPPT Technology and compatible with LiFePo4 battery, 12/24 Volt Automatic Selection, 15 A capacity,	12.8 Volt 100 Ah LiFePo4 Charge Controller with MPPT Technology and compatible with LiFePo4 battery, 12/24 Volt Automatic Selection, 15 A capacity,
LED Luminaire	3 x 3 Watt 2 x 6 Watt Recommended use of 6 hours operation	3 x 3 Watt 2 x 6 Watt Recommended use of 6 hours operation	3 x 3 Watt 2 x 6 Watt Recommended use of 6 hours operation
DC Fan	15 Watt with recommended use of 6 hours of operation	15 Watt with recommended use of 6 hours of operation	15 Watt with recommended use of 8 hours of operation
Option Port	For Radio	For 12 Volt DC TV and Radio	For 12 Volt DC TV and Radio
USB Port	For mobile Phone Charging USB 1A and Terminals for PV, Battery and loads	For Mobile Phone Charging USB 1A and Terminals for PV, Battery and loads	For Mobile Phone Charging USB 1A and Terminals for PV, Battery and loads

### Standards for Solar Home Lighting Systems:

S.No	List of Standards
1	<b>Solar PV Module</b> <b>IEC 61215-1:2016</b> IEC 61730-1: 2016 IEC 61730-2: 2016
2	<b>Battery</b> IEC 62133-2: 2017 IEC 61427-1: 2013
3	<b>White LED Lamps</b> IS 16102 (Part 1): 2012, IS 16102 (Part 2): 2017
4	<b>Solar Charge Controller</b> IEC 62109-1: 2010 <b>IEC 62509 :2010</b>
5	<b>Brushless DC ceiling Fans</b> IS 374: 2019
6	<b>USB Port</b> Type B or C

## TECHNICAL SPECIFICATIONS

### 1. SPV Module :-

The PV module should have crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II from an NABL or IECQ accredited Laboratory. The capacity should be minimum 100/200/300 Wp (Max +10% more than the nominal) Multi/Mono/PERC Crystalline/ solar modules having 21 Voc/36Voc/42 Voc voltage (Minimum) with **minimum 15% Module Efficiency**. The modules should be tested and certified by an IEC authorized test centers and should conform to relevant IEC standard. Offered module shall have a power discharge warranty of 90% of the rated power for 10 years and 80% of the rated power for 20 years. The module to have Encapsulation of Tempered Front Glass of 3.2 mm (Minimum). The rated discharge power and Efficiency of any supplied module shall not be less than the specified power rating and Efficiency of the modules, in any case. Every module should have suitable blocking diode at its terminal box. The SPV Modules must be installed in such a way so as to deliver proper voltage and current to ensure desired power discharge as per specifications of ISA for the size SHS ordered.

### 2. Battery Specifications Lithium Iron Phosphate Batteries (LFP) :-

The battery should be of minimum rating of 12.8V, 30Ah/60Ah/100 Ah with minimum individual cell Voltage of 3.2 V. Battery Specifications will be as follows-

S.no	Description/ Item	Specifications	Remarks
A	Battery Configuration	12.8 V – 30/60/100 Ah	LiFePo4
B	Type of Cell	Cylindrical or Prismatic	
1	Nominal Capacity	30/60/100 Ah	
2	Nominal Voltage	12.8 V	
3	Voltage Range	10V V ~14.6 V ±0.2V	
4	Total Energy	384/768/1280 Wh	
5	Charging Current	10 A	Rated Charge Current
		20 A	Maximum Charge current
6	Discharging Current	10 A	Rated Discharge current
		15A	Maximum discharge current
7	Discharge Cut-off Voltage	10V	
8	Charging Time	Around 4~5 Hours	Rated Charge
10	Cycle life	≥ 2500 Cycles	The cycle life is defined as the number of complete charge/ discharge cycles that the battery is able to support before that is capacity falls under 80 % of its original capacity; cycle life derived at 25 °C
11	Working Temperature Range	-20 degree C ~ 60 degree C; humidity ≤ 85%	While Discharging
		0 ~ 60 degree C ; humidity ≤ 85 %	While Charging
12	Storage temperature Range	0 ~ 45 degree C ;	1 Months
		0 ~ 35 degree C ;	1-3 Months
		0 ~ 25 degree C ;	3-12 Months

### 3. Connecting Cables

General Test and Measuring Method	IEC 60189
UV resistant for outdoor	IEC 69947
PVC insulated cables for Interconnections	IEC 62930

All the cables shall be supplied conforming to IEC 60227/ IEC 60502 shall be of 650 V/ 1.1 kV grade as per requirement.

Only PVC copper cables shall be used. The size of the cables between array to CCU, CCU to LED luminaries, and fan etc. shall be so selected to keep the voltage drop and losses to the minimum. Permissible Wire Drop shall be  $\leq 1\%$ . The DC cable from the SPV module, shall be run through a PVC conduit pipes, which in turn shall be firmly fixed to the wall with clamps. The DC cable from the CCU to Battery will be laid through a rigid PVC conduit.

- Separate wiring in external conduit pipes along with separate switch boards, switches for each LED lamp should be provided.
- Rigid PVC Conduit of nominal diameter as per IEC Standards.
- Clamps shall be provided at 1 meter spacing to secure the conduits
- Ensure color Coding of all wiring as per IEC
- DC cable from panel to CCU, CCU-Battery and internal wiring from CCU to three LED lights and fan should be as per requirement of site/house. Minimum Specification for cable /wires used:
  - Solar panels to CCU incomers DC 2 core multi strand 4 sq.mm copper cables.
  - From Battery to DC incomer of CCU: DC 2 core multi strand 2.5 sq.mm copper cables.
  - DC out going from CCU: 2.5 sq.mm multi strand copper wire.( separate wiring for each light and fan)
  - All earth wires- 2.5 sq.mm multi strand copper wire.
  - Suitable Glands shall be provided at all cable entries of the cabinet
  - Provide DC fuse between the battery plus terminal and the CCU at a location as close as possible to the battery plus terminals.
  - Miniature Circuit Breaker (MCB)-  $> 4A$ , 2 Pole - 12V DC

### 4. SOLAR CHARGE CONTROLLER UNIT

Charge Controller Type	Microprocessor Based Maximum Power Point Tracking (MPPT)
Charging Type	CC-CV (buck Charging, boost charge and equalization and)
BMS Integration	The CCU should be compatible with BMS of LiFePo4 Battery
MPPT Solar Charge Controller Rating	PV Input voltage 18-50 V Voc (100/200/300 Wp) Battery 12.8V/15A
Charging Current Range at 12.8V	10A~20A
Load Current Rating at 12.8V	15A
Idle Current (Self Consumption)	$< 10$ mA
Efficiency (Overall)	$> 90\%$ Solar Charge Controller $> 85\%$ (Total Electronic Efficiency)
Temperature Compensation	3mV/ degree C
Indications	<b>LED :</b> Green with Slow blinking - Charging under Process- Yellow- Battery Low Red- System Fault <b>LCD:</b> Panel Volt, Panel Current, PV Power, PV Energy, Battery Charging current, Battery Volt, Load current, Load Power,

	Battery SOC percentage, Both Load ON/OFF status, Fault status
Battery Voltage Settings	High Volt Cut Off Setting - 14.6V $\pm$ 0.2V Battery Low Load Disconnect - 10.8 V $\pm$ 0.2V Load Reconnect - 12.8 V $\pm$ 0.2V
Protections	<ul style="list-style-type: none"> <li>• Transient /Surge</li> <li>• Over Charging / Deep Discharge</li> <li>• Overload - Auto shutdown and restart</li> <li>• Solar and Battery Reverse Protection</li> <li>• Reverse Current from Battery at Night( Blocking Diode) <ul style="list-style-type: none"> <li>• No Load Auto Cut off (Battery Saver mode)</li> <li>• Miswiring/Reverse Polarity Protection (Fuse)</li> </ul> </li> </ul>
<b>Corrosion Protection</b>	Electronic circuit protected with conformal coating (protection against moisture, dust, chemicals, and temperature extremes)
<b>Electromagnetic Compatibility (EMC)</b>	Should not produce any interference, either radiated or conducted, in the radio frequencies: AM 530 kHz – 1600 kHz; SW1: 2.3 MHz – 7 MHz; SW2: 7 MHz – 22 MHz, and in any operating conditions
<b>Acoustic Noise</b>	Shall not exceed 35 dB at a distance of 1 m under all loading conditions:
<b>Voltage drop Battery - Use</b>	The drop in the voltage from battery to use points should be < 2%

The battery and CCU or other electronic components should be placed in an IP 21 enclosure in a cabinet suitable for indoor applications with the arrangements to protect circuits from insects. Also, provision for Charging from Module and load output for Fan, TV, Luminaries. It should be equipped with data logging facility such that the data can be downloaded to an external device using USB Port and Bluetooth. The data required to be captured are Daily Generation, Daily Utilization / Consumption and Daily Storage. Cells should conform to latest International Standards/ IEC/UN and CE certified cells should only be used.

Solar Charge Controller should be a MPPT type Charge controller with IEC Standards for design and environmental parameters, and should be in accordance with the charging parameters of LFP Batteries.

**5, DC Fan:-**The fan should be Table/ Mini Pedestal Fan 15 Watt-12 volt DC operated with following minimum requirement:

- (i) Type of motor: BLDC motor
- (ii) Rated voltage: 12 Volt .
- (iii) Operating Voltage range: 10.8 Volt to 15 Volt.
- (iv) Maximum Current Consumption (at 12V) -1.5 Amp
- (v) Sweep size : 300 mm (diameter) (minimum).
- (vi) Blades: Three leaves [Aluminum Powder Coated/ Acrylonitrile butadiene styrene (ABS)/Polycarbonate (PC) material]
- (vii) Power: 15 Watt (Minimum) RPM: 1100
- (viii) Bearings/oil bushes: As per standard and requirement.



- (ix) Speed : 3 variable speed
- (x) Reverse polarity protection: fan should not work with reverse polarity.
- (xi) Noise must be less than 30DB.
- (xii) Air flow of BLDC Fan should not be less than 120 CM/M.
- (xiii) The motor should be tested for its insulation test, temperature rise test, reliability test and noise tests.

**6. USB Port:-** Max rating – 1A

**7. Luminary:** Maximum 6 W LED batters as per BIS. Max current drawn should not exceed 0.6 Amp. Following IS shall be applicable for White LED Lamps

- a. IS 16102 (Part 1): 2012,
- b. IS 16102 (Part 2): 2017

- (i) The lumens output of luminaries should be minimum 100 lumens per watt with permissible standard tolerance maximum 3% as instrumental error.
- (ii) LED shall comply with LM 80 Standards and copy of test certificate should be submitted. The test certificate should be from NABL accredited lab authorized for testing of LED luminaries as LM 79 report. The detail specs mentioned in test parameter which required to be tested at NABL approved lab.
- (iii) Lighting Design of LED Luminary along with test report from NABL lab

**8. TV Socket:-** Max rating-3A

**BROAD PERFORMANCE SPECIFICATION**

S.No.	Parameters	Specifications
1	Solar Module	Minimum 100/200/300 Wp (Max +10% more than the nominal)
2	Operating Voltage	12.8V DC
3	Battery	Minimum 30/60/100 Ah LFP
4	Load	3X3 W (max) LED and 2*6 W(Max), 1X15W Fan(BLDC),1 USB Port,1 TV Socket
5	Average Duty Cycle	6Hrs Light, 6Hrs Fan and 6Hrs TV
6	Charge Controller	12 V /15 Amp MPPT Micro Processor Based Charge Controller. The enclosure for CCU and Battery assembled should be thermoplastic grade Plastic Type that can withstand the Battery's weight / Powder coated MS box (18 SWG) having provision for Charging from Module and load out put for Fan, TV, Luminaries (for both type).The charging unit should have all indication, Fuse, Hanging switch in luminary and mobile charging port.

**OTHER FEATURES**

A toll free number (010101100) of IVRS of Member country and 14 digit UID number of minimum computer font size 72 or 13 mm (issued/provided Member country) is to be embossed/ punch on battery box by contractor/ bidder, which in case of non-working/ operational problems etc of system will be dialed by the beneficiary etc. to lodge a complaint in respect of system problems. The IVRS will divert the complaint to Contractor/ bidder through E mail, SMS etc. The contractor/ bidder will have to rectify the same to make/ restore the system to working position within 72 hours in the warrantee period of 5 years, failing which the system may be get rectified on contractor/ bidder cost

and the cost will be recovered by contractor/ bidders pending claims what so ever and appropriate action as per non compliance etc. of agreement will be considered/taken.

### **INSTALLATION OF SYSTEM:**

The system should be properly installed at site. The SPV module mounting structure along with suitable mounting legs should be properly grouted depending upon the location and requirement of the site. The grouting should be such that it should withstand the maximum wind speed /storm up to 150 KM/hrs. The frame should be grouted with CC mixture of 1:2:4 Cables of appropriate size should be used to keep electrical losses to a bare minimum. All wiring should be in a proper conduit or capping case. Wire should not be hanging loose. Any minor items which are not specifically included in the scope of work but required for proper installation and efficient operation of the SPV systems is to be provided by the manufacturer as per standards. Wiring should be joint less and switches & fan regulator should be of appropriate value and suitable for DC operation. Separate wiring should be made for Lightning Arrestor. Anti-theft arrangement for module.

### **EARTHING**

The PV module structure and all metal casing / shielding shall be grounded properly using suitable earthing kits to safe guard it from lightening depending on the site conditions. However, it is not mandatory.

### **WARRANTY**

The mechanical structures, electrical works including power conditioners/inverters/charge controllers/ maximum power point tracker units/distribution boards/digital meters/ switchgear/ storage batteries, etc. and overall workmanship of the Solar power packs/ systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years.

### **Traceability of the product to be supplied**

In order to prevent the misuse of the product such as unauthorized sale or diversion to the open market, the following incorporation shall be made in the product.

A) Lamination of (MEMBER COUNTRY NAME) with MEMBER COUNTRY or NODAL MINISTRY logo at a suitable place on the main components viz., SPV Panel, Battery Box, LED Lighting Units to be used in the installation of the solar power pack systems.

B) The unique system ID number as provided by MEMBER COUNTRY shall be permanently marked.

### **O&M Manual**

Installation and operation instructions should be presented using language and graphics that can be understood by the typical consumer

### **Testing:**

Authorization requirement for Testing Centers: IEC/ UL/BIS / Member Country Government's accreditation should be acceptable.

### **RECYCLING:**

**Recycling of the material of the used systems will be done as per the policy of the Member Country.**

**ELIGIBILITY & QUALIFYING REQUIREMENTS****Notes:**

- i) Apart from the criteria given below, past performance of bidder(s), i.e., related to quality, supply, performance, etc. shall be taken into consideration during bid evaluation.
- ii) We reserves the right to independently verify the authenticity of the documents submitted/claims made by the bidder(s), and may also ask for presenting the original copy of the submitted document(s). Further, on such verification, if it is found that the bidder(s) has made false claims, submitted forged documents, etc., the bid shall be liable for outright rejection, notwithstanding other rights available under the tendered Terms and Conditions for taking actions against the bidder(s), as deemed fit.

The eligibility criteria are mentioned in table below.

S No.	Eligibility Criteria	Documents to be submitted and Annexed as given below	Details of the Documents submitted by Bidder(s) in brief
(A)	(B)	(C)	(D)
1	<p>(a) The bidder should be in business of manufacturing of Solar Home System : Solar PV Module/Battery Manufacturer (for minimum five years as on last date of bid submission).</p> <p>Or</p> <p>System Integrators involved in design, manufacture, testing or installation of Solar PV Project/ Solar Home System ((involving Solar PV Modules, Battery, Solar Charge Controller, etc. intended for households)) (for minimum five years as on last date of bid submission).</p>	<p><b>For Manufacturer only:-</b></p> <p>(a) Manufacturing Proof such as Factory License, Labor Certificate etc. as per provision in respective country of operations.</p> <p>AND</p> <p>(b) Test Certificate for any one of the components (Solar PV Modules/ Battery) from any International Accredited Test lab is mandatory</p> <p>AND</p> <p><b>For Manufacturers &amp; System Integrators:</b></p> <p>Article of Association (highlighting the relevant provisions/ article number which highlights the objects relating to the business fields mentioned above).</p>	<p>Declaration                      letter                      ref. no. _____, and date _____.</p>

2	<p><b>Manufacturers:</b></p> <p>The Bidder must have experience of supply of following items (within last five years as on last date of bid submission) :</p> <p>a) at least 140,200 nos. of Batteries of the capacity 30Amp-hour or above <b>or</b></p> <p>b) at least 78 MW of Solar PV Modules,</p> <p style="text-align: center;"><b>OR</b></p> <p><b>System Integrator:</b></p> <p>Bidder shall have Designed, Engineered, Supplied, Constructed, Erected, Tested and Commissioned 78 MW of Solar PV Power Projects including Operation &amp; Maintenance for at least 3 years period. The start date of O&amp; M period should not be more than 5 years old as on last date of bid submission</p> <p>Or</p> <p>Bidder shall have Designed, Engineered, Supplied, Constructed, Erected, Tested and Commissioned 140,200 nos. of Solar Home System (involving Solar PV Modules, Battery, Solar Charge Controller, etc. intended for households) including Operation &amp; Maintenance for at least 3 years period. The start date of O&amp; M period should not be more than 5 years old as on last date of bid submission</p>	<p>Evidence of experience shall be submitted in the bid such as certified copy (ies) of Purchase Order(s)/ Letter of Award(s), Work Order(s)</p> <p>AND</p> <p>Completion Certificate(s)/proof of payment/Release of Security Deposit/ Performance Guarantee etc.</p>	<p>Declaration letter ref. no._____, and date _____.</p>
3	<p>For Indian bidder(s) should be a firm registered/incorporated under Indian Companies Act, 1956 or Companies Act, 2013, and further amendment (s).</p> <p>For international bidder(s) company (as an individual), it should be in existence in its parent country for last 3 years.</p>	<p>For Indian bidders certificate of Incorporation issued under Indian Companies Act, 1956 or Companies Act, 2013 from Registrar of Companies to be submitted.</p> <p>In addition, GST number and PAN card for Indian company.</p>	<p>Company Incorporation Certificate No._____</p> <p>Date : _____</p> <p>Country of origin of goods _____</p>

		For international firms, company incorporation certificate under relevant laws / acts of parent country.	
4	<p><b><u>Applicable only for International Bidder Participating Through an Agent:</u></b></p> <p>In this Tender, either the Indian agent on behalf of the Principals/OEM or Principals/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.</p> <p>If an agent submits bid on behalf of the Principals/OEM, the same agent shall not submit a bid on behalf of another Principals/OEM in this Tender for the same item/product.</p>	<p>Agreement between Principals/OEM or Principals/OEM and local agent for this tender.</p> <p>Please note that no separate fees for agent/agency commission shall be paid by EESL.</p>	

5	The Bidder(s) should not be under a declaration of ineligibility / banned / blacklisted for any statutory and/or performance reasons, as on last date of submission of the Bid.	<p>Self-certification at the time of bid submission.</p> <p>For international company, bidder(s) shall declare with reference to the federal / state province in parent country. The bidder(s) shall also self-certify if the international company has been banned /blacklisted by any government organization in India.</p>	Self-Certification
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**Note:** All the required documents must be properly annexed and submitted as mentioned above with necessary details in brief in column D.

The Qualifying Requirements (including Financial and Technical criteria) are mentioned in table below.

### **Qualifying Requirements**

S. No.	Parameter	Applicable for Indian company	Applicable for International company	Document to be provided
<b>Financial Qualification Criteria</b>				
F1	Average Annual turnover of the bidder of the last three financial years (FY 2016-17, 17-18, 18-19).	INR 631 Crores	USD 84 Millions	The Bidder shall submit audited balance sheets/financial statements or, if not required by the law of the Bidder's country, other financial statements, acceptable to the Purchaser, for the last three (3) years to demonstrate the current soundness of the Bidder's financial position.
F2	Net worth in last financial year(2018-19) should not be less than 100% of paid up capital.	Y/N	Y/N	Audited Financial Statements
F3	Entity shall be profitable in at least 2 out of 3 previous Financial years (2016-17, 17-18 & 18-19).	Y/N	Y/N	Duly authorized copy of audited balance sheet for preceding last three financial Year is to be submitted by Bidder.  Profitability means Profit After Tax

In addition to above, following notes will also be applicable: -

- (i) A Bidder shall operate in conformity with the provisions of the laws of that country.
- (ii) A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:
  - a. they have controlling shareholders in common; or
  - b. they receive or have received any direct or indirect subsidy from any of them; or
  - c. they have the same legal representative for purposes of this Bid; or
  - d. they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the Bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
  - e. Bidder participates in more than one bid in this bidding process, either individually or as a partner in a joint venture. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of clause (a)–(d) above, this does not limit the participation of a Bidder as a subcontractor in another bid or of a firm as a subcontractor in more than one Bid; or
  - f. Bidder or any affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the goods and services that are the subject of the Bid; or
  - g. Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Purchaser or Borrower as Project Manager for the contract.
- (iii) A firm, which is under temporary suspension or debarment by any Bi / Multi-Lateral Agency/EESL/ISA or its Member Country/Any Agency of country, pursuant to its Anticorruption Policy, shall not be eligible to participate in this procurement activity. A bid from a temporary suspended or debarred firm will be rejected.
- (iv) Government-owned enterprises in the Purchaser's country shall be eligible only if they can establish that they
  - (i) are legally and financially autonomous,
  - (ii) operate under commercial law, and
  - (iii) are not a dependent agency of the Purchaser.
- (v) Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.
- (vi) Firms shall be excluded if by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country or any payments to persons or entities in that country.



**Notes General**

- (i) Confirmation to comply to operate as per the provision of the laws of that country
- (ii) Declaration of "Conflict of Interest"
- (iii) Declaration of "Temporary Suspension or Debarment" by Bi / Multi-Lateral Agency/ or any other country
- (iv) Declaration of exclusion by an act of compliance with the decision of the United Nation Security Council (if applicable)