

Online tenders are invited in two stage bid system i.e. Technical bid and Financial Bid as per the details given below in Schedule-A

**REVISED SCHEDULE-A**  
(Effective w.e.f 16.12.2020)

Sr. No.	PARTICULARS	REMARKS
1	Tender Notice No.	13/2021-2022
2	Sr. No. of Tender.	01 Group-II
3	Superscribed No. of Tender.	36/HR/RC/G-2/2021-22
4	Online submission of EMD, Tender fee & e-Service Fee <b>Option-1: Through Net Banking and Debit card</b>	On or before last date of submission of Technical Bids upto 12:00 Noon
5	Online submission of EMD <b>Option-2: Through RTGS/ NEFT-</b> <i>(In case of above, the bidder has to pay Tender Fee &amp; e-Service Fee Through Net Banking and Debit card as per the given date &amp; time schedule)</i>	On or before 14.07.2021 Upto 02:00 P.M.
6	On line Bid Preparation & submission.	Upto 16.07.2021 at 02:00 P.M.
7	Date & time of opening of Technical Bids/s.	On or after 16.07.2021 at 02:30 P.M.
8	Date & time of opening of Financial Bids/s	To be decided later on
9	<b>Tender Fee:</b>	
	(I) For Haryana based manufacturing Micro and Small Enterprises (MSEs) & Khadi Village Industries Unit eligible as per the "Haryana State Public Procurement Policy for MSME - 2016" notified vide G.O. No. 2/2/2016-4I BII(1) dated 20-10-2016 and as amended from time to time.	NIL
	(II) For Haryana based Startups/First Generation Entrepreneurs eligible as per State policy "Concession/benefits in Public Procurement to Startups/First Generation Entrepreneurs of State" issued vide G.O No.2/2/2016-4I B-II dated 03.01.2019.	NIL
	(III) For remaining bidders both from the Haryana and Non Haryana	Rs. 5000/-
	<b>Earnest Money Deposit (EMD) required:</b>	
10	(I) For Haryana based manufacturing Micro and Small Enterprises (MSEs) & Khadi Village Industries Unit eligible as per the "Haryana State Public Procurement Policy for MSME - 2016" notified vide G.O. No. 2/2/2016-4I BII(1) dated 20-10-2016 and as amended from time to time.	NIL
	(II) For Haryana based Startups/First Generation Entrepreneurs eligible as per State policy "Concession/benefits in Public Procurement	NIL

**SUPPLIES & DISPOSALS DEPARTMENT, HARYANA**  
**S.C.O. No. 09, 1<sup>st</sup> & 11<sup>nd</sup> Floor, Sector-16, Panchkula-134109 (Haryana)**  
**Ph.:- 0172-2570121, 123, 124. Fax No.:- 0172-2570122.**  
**e-mail:- supplies@hry.nic.in , website:- dsndharyana.gov.in**

	to Startups/First Generation Entrepreneurs of State” issued vide G.O No.2/2/2016-4I B-II dated 03.01.2019.	
	(III) Central or Haryana Public Sector Enterprises and “approved sources” as declared by the Industries Department, Haryana	NIL
	(IV) For remaining bidders both from the Haryana and Non Haryana	2,00,000/-
11	E-Service Fee	Rs. 1000/-
12	Date and time of receipt of samples (if required)	<b>On 16.07.2021 from 02.30 PM to 04.30 P.M</b>
13	Rates to be kept valid for acceptance upto:	31.12.2021

**A. Information to Bidders:**

i. The Bidders can download the tender documents from the Portal: <https://etenders.hry.nic.in>

1. Date and Time of making payment of tender fee, earnest money deposit (EMD) and e-service fee is as under:

<b>A</b>	Online submission of EMD, Tender fee & e-Service Fee <b>Option-1: Through Net Banking and Debit card</b>	On or before last date of submission of Technical Bids upto 12:00 Noon
<b>B</b>	Online submission of EMD <b>Option-2: Through RTGS/ NEFT-</b> <i>(In case of above, the bidder has to pay Tender fee &amp; e-Service fee Through Net Banking and Debit card as per the given date &amp; time schedule)</i>	On or before 14.07.2021 Upto 02:00 P.M.

2. As the Bids are to be submitted online and are required to be encrypted and digitally signed, the Bidders are advised to obtain Digital Signature Certificate (DSC) at the earliest. For obtaining Digital Certificate, the Bidders should follow Point No.- 2 under “Instructions to bidder on Electronic Tendering System” and available in folder of “Tender Forms” available on following link <http://dsndharyana.gov.in/Portals/0/Tender%20form/Tender%20Forms%2016.12.2020.zip?ver=2020-12-18-122317-777> and for information about DSC at NIC Portal visit <https://etenders.hry.nic.in/nicgep/app?page=DSCInfo&service=page>
3. The Bidders shall have to pay for the Tender Documents Fee, EMD Fees & e-Service Fee online by using the service of secure electronic payment gateway. The secure electronic payments gateway is an online interface between bidders and online payment authorization networks.
4. The bidders must have Net Banking account in order to pay Tender Document Fee and e-Service Fee.
5. **Payment of Tender Fee:-** The payment for the Tender Document Fee shall be made by the interested bidder online directly through Net Banking with the available Banks at e-GRAS e-Payment Gateway.
6. **Payment of e-Service Fee:-** E-Service Fee payment shall be made separately by the interested bidders/ contractors online directly through Net Banking Account.
7. **Payment of EMD:-** The payment of EMD can be made through Net Banking or RTGS/ NEFT as per details at Para-2 above. In this regard please refer to “Instructions to bidder on Electronic Tendering System” available at the available in folder of “Tender Forms” on website : <https://dsndharyana.gov.in>

8. Intending bidders will be mandatorily required to sign-up online (create user account) on the website <https://etenders.hry.nic.in> to be eligible to participate in the e-Tender. In case the intended bidder fails to pay EMD fee under the stipulated time frame, he/she shall not be allowed to submit his/ her bids for the respective event/ Tenders.
9. In case of payment of EMD through RTGS/ NEFT, the interested bidders must remit the funds at least T+1 working day (Transaction + One Day) in advance i.e. on or before 14.07.2021 upto 2.00 P.M; and make payment via RTGS/NEFT to the beneficiary account number specified under the online generated challan. The intended bidder/ Agency thereafter will be able to successfully verify their payment online, and submit their bids on or before the expiry date & time of the respective events/ Tenders at <https://etenders.hry.nic.in>
10. However, the details of the EMD, Tender document Fee & E - Service Fee are required to be filled/ provided at the time of online Bid Preparation.
11. Online Technical Envelope—Reference details of the Earnest Money Deposit, Tender Document Fee & e - Service Fee instrument and scanned copies of supporting documents and QR/technical criteria with proper index and page numbering on all the documents have to be provided as per **Annexure-IA** of this document.
12. If the tenders are cancelled or recalled on any grounds, the Tender Document Fee and e-Service Fee will not be refunded to the bidder.

**B. Brief Description of Procuring/ Rate Contract item:-**

Item Sr. No.	Description of Stores	Quantity	Estimated Value in Rs.	Place of Delivery
1	Supply, installation and commissioning of LED Based SPV Street Lighting System with five years warranty of complete system required by New & Renewable Energy Department, Haryana.	5000 nos.	Annual Rate Contract basis (Estimated cost is Rs.2100.00)	Anywhere in Haryana
2.	Supply, installation and commissioning of LED Based Solar High Mast Lighting System with five years warranty of complete system required by New & Renewable Energy Department, Haryana.	1000 nos.		Anywhere in Haryana

The detailed technical specifications/description of the above stores are available at **Annexure-I & II** of this document.

**C. Specific Terms & Condition/ Eligibility Criteria related to above Store:**

**(I) Eligibility Criteria:**

1. The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto or proprietary/partnership/LLP firm. A

copy of certificate of incorporation shall be furnished along with the bid in support of above.

**2. (a) For LED Based SPV Street Lighting Systems :**

The bidder should be a manufacturer of solar modules/solar cells/Lithium battery or System Integrator. The System Integrator has to submit the undertaking issued by each manufacturer of major parts/devices (solar modules, battery and luminaire )to be used in system with whom they have tie up mentioning that in case System Integrator defaults, at any stage of execution of warrantee/guarantee/CMC and after sale service of the said device, installed in reference to rate contract of the said tender, then the Company will be responsible to execute the warrantee/guarantee/CMC of the said device at site of installation as per the terms and conditions of rate contract/DNIT of the above tender and will adhere the directions of the New & Renewable Energy Department/HAREDA directly.

**(b) For LED Based Solar High Mast Lighting Systems:**

The bidder should be a manufacturer of solar modules/solar cells/Lithium battery or System Integrator. The System Integrator has to submit the undertaking issued by each manufacturer of major parts/devices (solar modules, battery, luminaire and CCTV Camera )to be used in system with whom they have tie up mentioning that in case System Integrator defaults, at any stage of execution of warrantee/guarantee/CMC and after sale service of the said device, installed in reference to rate contract of the said tender, then the Company will be responsible to execute the warrantee/guarantee/CMC of the said device at site of installation as per the terms and conditions of rate contract/DNIT of the above tender and will adhere the directions of the New & Renewable Energy Department/HAREDA directly.

**3. (a) For LED Based SPV Street Lighting Systems :**

The bidder has to submit Test report of the complete system in its name issued by any of the MNRE / BIS /IEC/ NABL accredited laboratory on or after 01.04.2018. Bid without valid test report from MNRE / BIS /IEC/ NABL accredited laboratory will be rejected out rightly. The test report should contain the make and model of major components i.e. module, battery and Luminaire along with their photograph.

**(b) For LED Based Solar High Mast Lighting Systems:**

The bidder has to submit Test report of one unit (110 watt module, 22 Watt LED Luminaire, 12.8 Volt 50 Ah LiFePO4 battery and Solar CCTV Camera) of LED Based Solar High Mast Lighting System in its name issued by any of the MNRE / BIS /IEC/ NABL accredited laboratory on or after 01.04.2018. Bid without valid test report from MNRE / BIS /IEC/ NABL accredited laboratory will be rejected out rightly. The test report should contain the make and model of major components i.e. module, battery, Luminaire and Solar CCTV Camera along with their photograph.

**4. Domestically manufactured PV Module with domestically manufactured solar PV cells should be used. The PV modules should be made up of crystalline silicon solar cells and**

must have BIS certificate for IS 14286 & IS 61730 (Part-I, Part II). PV modules must meet the latest specifications of MNRE and the models and Manufacturers of PV Modules shall be included in the List of Models and Manufacturers for Solar PV Modules empanelled by MNRE as per its ALMM order *at the time of invoicing*. To bring contractual clarity, Bidders has to give explicit declaration that they are aware of binding provisions of the ALMM Order and the List(s) there under, while quoting the rates in the bid.

*If the Manufacturers of PV Modules has applied to MNRE for including their models and name in the List of Models and Manufacturers for Solar PV Modules empanelled by MNRE in its ALMM order, then the bidder has to submit the acknowledgement for application for the same at the time of bidding. The solar module must be enlisted in the ALMM at the time of invoicing. If the name is not included in the said list as on the date of invoicing and supply to the beneficiary, then the supplies of empaneled bidders will be treated as rejected and considering them technically non-eligible & there empanelment shall be cancelled (it is the responsibility of the empaneled bidder to submit the proof of inclusion of their models and name in the said list during invoicing and supply to the beneficiary).*

5. All other major components should also be indigenously made i.e. Lithium battery, Luminaire and CCTV Camera.
6. The firm should have a valid ISO 9001:2015 Certificate should be issued from any NABCB accredited certification body in the field of quoted item and copy of the same must be attached with offer.
7. Bidder should have not been debarred/blacklisted by any Govt. Deptt's / organization/ PSU's / institutions/ agencies/ autonomous Organizations.
8. The Bidder should have valid GST registration certificate of the billing state. A copy of which should be enclosed.
9. The Successful Bidder shall be required to establish at least one Service Centre at Divisional Level in their area of operation in Haryana. The successful bidder should maintain the inventory of required spare parts at the service centre(s).
10. Past performance of the firms shall be considered while evaluating the technical bids. If the bidder has poor record for providing after sales services to the Haryana during last five years than their bid may be rejected out rightly.
11. Bidder should have minimum average annual turnover of Rs. 630.00 Lakhs in the last three years, ending 31<sup>st</sup> March of the previous Financial Year i.e. up to 2020-2021.
12. Experience and Past Performance of having successfully completed similar contracts i.e. Solar Street Light/ Solar Home Light costing not less than Rs. 840.00 Lakhs during last three years ending 31<sup>st</sup> March of the previous Financial year (2020-2021), to Govt./ Semi Govt. Organizations.
13. The bidder should have positive net worth in the previous last three Financial Year i.e. upto 2020-21. *(Document to be uploaded: Certificate in given format*

14. (a) For LED Based SPV Street Lighting Systems :

Bidder is required to submit a sample of the quoted product (Solar PV Module, Battery and Luminaire) along with tender. Non-compliance shall in rejection of the bid.

(b) For LED Based Solar High Mast Lighting Systems:

Bidder is required to submit a sample of one unit of the quoted product (110 Watt Solar PV Module, 22 Watt LED Luminaire, 12.8 Volt 50Ah LiFePO4 batteries) & one CCTV Camara along with tender. Non-compliance shall in rejection of the bid.

**Note:**

The Samples of the quoted items shall be supplied free of cost. No sample will be accepted after prescribed period. In the event of non-submission of samples within prescribed period, the bid shall not be considered. **The sample of above said items shall be deposited with the Sample Assistant of this office at SCO No. 37, (Back side Basement) Sector-11, Panchkula as per date and time given above. Old/belated sample shall not be considered. Non-compliance shall in rejection of the bid.**

15. Technical Catalogue of the product is required to be submitted along with the bid & same should be available on bidder's website.
16. Rate Contract will be made / valid for one year from the date of issue.
17. The rates quoted should be inclusive of GST and all other charges etc. (whichever applicable).
18. **Delivery period (includes supply, installation & commissioning):-**Three months from the date of placement of work order.
19. **Warranty:** - Five years from the date of commissioning (including batteries) and PV module(s) will be warranted for a minimum period of 25 years from the date of supply. PV modules used in Solar Home system must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty five (25) years.
20. **Payment :-**
- i. 60% payment will be released within one month time on submission of material receipt of physical delivery of inspected/ accepted goods in physically good condition at consignee go down on submission of bill of material supported by material receipt duly signed by PO/APO of the department/ office.
  - ii. 29% will be released within one month time after satisfactory installation / working of the items on submission of joint commissioning report (JCR) in the attached format duly signed by the user & PO/APO of the consignee department/ office with countersignature of head of the office.

- iii. 10% payment to be released @ 2% at the end of each year for 5 years, on submission of satisfactory performance report of the systems duly certified by the concerned district officer and user OR The said amount may be released against the submission of bank guarantee of equal amount valid for five years from commissioning of the plant.
  - iv. 1% will be released after 25 years of satisfactory performance report of Solar Module.
21. Material shall be strictly as per DNIT specifications/requirement. If there is any left out specification, the same shall be considered as per the latest specification/requirements applicable as per BIS/International Standards. The bidders are advised to be well conversant with these specifications/requirements for their compliance.
22. The make and model of major components of the system i.e. Solar module, Solar Charger, Battery, Ceiling Fan and Luminaries (bulb/batten) should be strictly as per the make and model mentioned in the test report and sample submitted with the bid. Accordingly, the same should be mentioned in the technical bid.
23. In case of any complaint in the working of the items during the warranty period, the firm shall attend the same within 24 hours from the time of logging of first complaint / call by the consignee and the items must be repaired within three days thereafter. The complaints would be logged by the Department officers by e-mail/ fax in order to keep the proper delivery records. Further in case of failure to do so, penalty @ 0.1 % of the system cost per day (subject to max. 10% of the cost) after expiry of 72 hours shall be imposed. If the firm does not attend the complaint within the max penalty period then the system may be got repaired/ replaced from the performance security amount. In case whole performance security amount is utilized and complaint/s are still pending then an online / registered notice will be sent to the firm to attend the complaint and if failed to attend the complaint within 7 days then firm may be blacklisted and a legal proceedings may be initiated against the firm for breach the agreement.
24. The applicable GST will be 8.9% as mentioned in the Govt. of India, Ministry of Finance Amendments, Notification No. 25/2018- Integrated Tax (Rate) and Notification No. 24/2018- Central Tax (Rate), Dated- 31st Dec. 2018 Section-B (vii), goods specified in entry S.No. 234 i.e. Solar Power Based Devices or Solar Power Generating System, are supplied with other goods and services then the value of goods shall be deemed as seventy Percent of the gross consideration charged for all such supplies i.e. to be charged at 5% GST, and the remaining thirty percent of the gross consideration charged shall be deemed as value of the said taxable services i.e. to be charged at 18% GST, thus amounting to an overall tax rate of 8.9%. Further, if any change /amendment in thereof, same will be applicable.
25. The price quoted should be FOR anywhere in the State of Haryana inclusive of all taxes and duties, custom duty, excise duty, service tax, sales tax, C.S.T., local taxes, GST, Income tax, Surcharge on income tax etc. If any, including 5 years warranty (or as notifies in the bid) of the complete system/plant. A supplier/contractor shall be entirely responsible for all taxes, duties, license fees, etc. All taxes payable as per Government income tax & service tax norms will be payable by the contractor. If any new tax/duty is levies during the contract period the same will be borne by the firm exclusively. TDS will be deducted from the payment of the contractor as per the prevalent laws and rules of Government of India and Government of Haryana State in this regard.

26. Under no circumstances will a father or his son or their close relation or the partner of one firm be allowed to tender as separate tender. A breach of this condition will cause the tenders of such parties liable for rejection, forfeiture of their earnest money and the firm may be black listed.
27. The firm (s) tendering shall clearly mention in their tender whether any of the close/near relative of their management/ management of sister concerned firms is in the employment of the HAREDA/Department of New & Renewable Energy, Haryana and in case their close/near relative is in employment of the HAREDA/Department of New & Renewable Energy, Haryana then his/her name, designation and place of posting to be mentioned.  
If the tendering firm not disclose and furnish the correct information as required in above clause, then his earnest money and/or Performance Security Deposit may be forfeited and in case the contractor has been awarded the work, the same may be cancelled. For concealing any information the firm may be black listed.

**Note:**

The word "Close/Near Relative" mentioned in the above clause means father, mother, brother, sister, brother-in-law, sister-in-law, daughter-in-law, daughter, father-in-law, mother-in-law, son, son-in-law, first cousin of self/spouse, spouse, father-in-law and mother-in-law of son/daughter.

28. Bidder who is manufacturer of Solar PV Modules or Solar Cells or Lithium battery and manufacturing the said item (s) in its unit and having valid test report of, tested as per MNRE, GOI latest guidelines/BIS for minimal technical specifications of the tender document in its own name (the bidder) issued by MNRE/NABL/IEC accredited testing center shall be treated as manufacturer for getting the benefits of concession under MME/MSME policy. The test report shall be issued by the date of closing the tender and shall be valid as on date of opening of the technical bid. The bidder shall have manufacturing facility of the said item, with testing facility, in its unit.
29. If any bidder provides false information or conceals the facts regarding debarred/blacklisted, experience, turnover or other conditions mentioned in this tender, Nodal agency reserves the right to forfeit both EMD & Performance Bank Guarantee of the bidder, to black list the bidders, to cancel the contract and other punitive action.
30. **(a) For LED Based SPV Street Lighting Systems :**

At least 10% of the ordered street lights shall be provided with remote monitoring system. Details of the Solar Street Light installations are to be provided to the Indenting Officer in the prescribed format. Therefore, furnishing of rates for system with Remote Monitoring System is mandatory and in case, bidder submits his bid only for the system without remote monitoring system will be rejected out rightly.

The details regarding remote monitoring system are given below:-

Inbuilt remote monitoring facility should be available in MPPT Charge Controller and it should recording following System Parameters at a fixed time interval for system health



analysis ( time interval should be changeable from 15 minutes to 4 hours and will be intimated at the time of award of work as per the requirements).

- I. Battery Parameters :
  - a. Battery Voltage ( BV)
  - b. Battery Current (BI)
  - c. Battery Power (BP)
  
- II. Solar PV Parameters :
  - a. Solar PV Voltage (SV)
  - b. Solar PV Current (SI)
  - c. Solar PV Power (SP)
  
- III. Load Parameter
  - a. Load Voltage (LV)
  - b. Load Current (LI)
  - c. Load Power (LP)
  - d. Load ON/OFF condition
  
- IV. System shutdown due to fault ( even fault should be recorded)
  
- V. Site Coordinates ( Latitude & Longitude)

The remote monitoring can be done using any of available communication modes like GSM/GPRS/SMS. The cost for the same should be borne by the successful bidder.

**(b) For LED Based Solar High Mast Lighting Systems:**

At least 25% of the ordered systems shall be provided with Solar CCTV Cameras as per the specifications. Therefore, furnishing of rates for system with CCTV Camera is mandatory and in case, bidder submits his bid only for the system without CCTV Camera, will be rejected out rightly.

**PERFORMA-I**

**INFORMATION IN SUPPORT OF MEETING ESSENTIAL ELIGIBILITY CONDITIONS REGARDING  
AVERAGE ANNUAL TURNOVER OF THE BIDDER IN LAST THREE FINANCIAL YEAR ENDING  
31.3.2021**

**Annual turnover of the bidder in last three financial year:**

Name of Bidder: \_\_\_\_\_

Annual turnover data for last three years ending on 31 <sup>st</sup> March 2021			
S.No.	Year	Turnover (Rs. In Lacs)	Turnover Rupees in words
1.	2018-19		
2.	2019-20		
3.	2020-21		
4.	Average turnover in last three years ending on 31 <sup>st</sup> March 2021 =(1+2+3)/3		

Signature with seal of bidder  
Dated: \_\_\_\_\_

Signature of Chartered Accountant with seal  
Name \_\_\_\_\_  
Name of CA Company: \_\_\_\_\_  
M.No. \_\_\_\_\_

**Note:**

1. Bidder must complete the information in this form.
2. The information provided shall be certified by Chartered Accountant.

**PERFORMA-II (A)**

**DECLARATION BY THE BIDDER  
(To be submitted on letter head of Bidder)**

Reference No: \_\_\_\_\_

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

To

The Director General,  
Supplies and Disposals Department, Haryana  
Panchkula (Haryana),

**Subject: Supply, installation and commissioning of LED Based Solar street Lighting Systems and LED Based Solar High Mast Lighting systems in Haryana State with five years warranty of complete system.**

Madam/ Sir,

1. We have read and examined the tender documents relating to the subject cited works (hereinafter referred to as “Works”) as issued by you:
2. Having examined the Tender Documents and being duly authorized we, hereby, bid for the execution, and completion of the Works referred to in the Tender Documents upon the terms and conditions contained or referred to therein and in accordance to all respects with the specifications and other details given therein.
3. ‘PURCHASER’ and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this Bid, and to seek clarifications from our bankers and employers regarding any financial and technical aspects. This Bid shall also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information to provide such information deemed necessary and as requested by you to verify statements and information provided in this application, such as the resources, experience, and competence of the Bidder.
4. We agree to keep this Bid open for acceptance for 180 days from the date of opening of Financial Bid, or such other extended period as may be required by you and also agree not to make any modifications in its terms and conditions of our own accord.
5. We agree if we fail to keep the validity of Bid open, as aforesaid, or we make any modification in the terms and conditions of our Bid of our own accord or after the acceptance of our Bid if we fail to execute an Agreement as prescribed in the Tender Documents or commence the execution of the works as provided in the Tender Documents, we shall become liable for forfeiture of the Earnest Money Deposit. In such an event you shall, without prejudice to any other right or remedy, be at liberty to forfeit the Earnest Money Deposit absolutely and take other actions as per terms & conditions of the contract.
6. We certify that the Bid submitted by us is strictly in accordance with the terms, conditions, specifications etc. as contained in the Tender Documents, and it is further certified that it does not contain any deviations to the aforesaid documents.
7. The bid is made with the full understanding that:-
  - a. Bids by qualified bidders will be subject to verification of all information submitted for qualification at the time of bidding
  - b. PURCHASER reserves the right to:
    - i. Amend the scope and value of any work bid under this tender.
    - ii. Reject or accept any application, cancel the tender process and reject all bidders by giving a written notice.
8. PURCHASER shall not be liable for any actions taken under (b) i and ii above.
9. We undertake, if our bid is accepted, and on receipt of the work order to commence the works and to complete and deliver the whole of works comprised in the contract within the period stated and in compliance with the tender documents.
10. If our bid is accepted, we will furnish Performance Security Deposit as per terms & conditions mentioned in EOI.
11. We understand that you are not bound to accept the lowest or any bid you may receive.
12. All the major items like module, battery, luminaire, CCTV Camera, wire etc. to be used in the systems shall be indigenously made.
13. We are capable of executing and completing the work as required in the tender.

14. We accept all risks and responsibilities directly or indirectly connected with the performance of the tender.
15. We have no collusion with other Bidder, any employee of DNRE & HAREDA or with any other person or firm in the preparation of the bid.
16. We have not been influenced by any statement or promises of DNRE & HAREDA or any of its employees, but only by the tender document.
17. We are financially solvent and sound to execute the work.
18. We have sufficient experience and competent to perform the contract to the satisfaction of DNRE & HAREDA.
19. We are familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
20. Our company has never been debarred from similar type of work by DNRE & HAREDA and or any of the Government undertaking/Department.
21. We assure to execute the tendered work as per specifications, terms and conditions of the contract. If awarded to us.
22. The undersigned declare that the statements made and the information provided in the Bid including the completed applications and formats are complete, true, and correct in all aspects.

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

Date of Submission:

(Signature of the Bidder)  
(Seal)

Place:

**PERFORMA-II(B)**

#### **DECLARATION BY THE BIDDER REGARDING QUALIFICATIONS**

**In relation to my/our Bid submitted to DS&D in response to their Notice Inviting Bids for Supply, installation and commissioning of LED Based Solar Street Lighting and LED Based Solar High Mast Lighting Systems in Haryana hereby declare that:**

1. I/we possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
2. I/we have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;

3. I/we are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceedings for any of the foregoing reasons;

4. I/we do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;

5. I/we do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

SIGNATURE OF AUTHORISED  
SIGNATORY OF THE BIDDER  
WITH SEAL

Date:

Name:

Designation:

Address:

**PERFORMA-III**

**GENERAL PARTICULARS OF BIDDER**

Bid for Supply, installation and commissioning of LED Based Solar street Lighting Systems and LED Based Solar High Mast Lighting Systems in the Haryana State with five years warranty of complete system.

1	Name of firm	
2.	Postal Address	
3.	Telephone, Fax No	
4.	E-mail	
5.	Website	
6.	<b>Category of Bidder/ Type of Organization</b>  The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto or	

**SUPPLIES & DISPOSALS DEPARTMENT, HARYANA**  
**S.C.O. No. 09, 1<sup>st</sup> & 11<sup>nd</sup> Floor, Sector-16, Panchkula-134109 (Haryana)**  
**Ph.:- 0172-2570121, 123, 124. Fax No.:- 0172-2570122.**  
**e-mail:- supplies@hry.nic.in , website:- dsndharyana.gov.in**

	proprietary/partnership firm/LLP. A copy of certificate of incorporation shall be furnished along with the bid in support of above.	
7.	<p>Whether, the bidder (manufacturer of solar module/solar cell/ Lithium battery of Haryana) is any one of the following:</p> <ul style="list-style-type: none"> <li>• Manufacturing Micro &amp; Small Enterprises (including Khadi &amp; Village Industries) or</li> <li>• Manufacturing Medium Enterprises (including Khadi &amp; Village Industries)</li> </ul> <p><i>If, the bidder Manufacturing Small &amp; Medium Enterprises (including Khadi&amp; Village Industries) or Manufacturing Micro Enterprises (including Khadi&amp; Village Industries), then please mention the device/item for which it is registered. A copy of certificate of Entrepreneurs Memorandum/UDYOG AADHAR/Odyam Registration in Haryana should be furnished along with the bid in support of above.</i></p> <p>OR System Integrator</p>	
7.1	Quality Certification of ISI/ISO/AgMark/Quality mark issued form competent authority in State or Central Govt. in respect of the items/goods mentioned in the tender (Provide the required certification No. and upload the certificate with the bid).	
7.2	Is the bidder registered with DGS&D/NSIC/GOI Department/State Govt. Department/GOI PSUs/State Govt. PSUs in respect of the items/goods mentioned in the tender? (Yes/No, if yes, upload the certificate with the bid)	
7.3	<p>If bidder is claiming benefits under “Haryana State Public Procurement Policy for MSME -2016” vide G.O. No. 2/2/2016-4I BII(1) dated20-10-2016and amendment vide G.O. No. 2/2/2016-4IB-II dated11.12.2019which will be applicable in respect of concessions to Haryana based MSMEs and KVIs for claiming the relevant concession/s like Tender Fee, Earnest Money Deposit (EMD), Turnover, Exemption in respect of Past Performance &amp; Experience, Purchase Preference and Performance Security then the bidders are required to submit the requisite documents as required in said policy.</p> <p><b>Submit requisite Documents in this regards</b></p>	
8.	Name of Directors of Company (at least Two directors with email IDs & contact Numbers)	
9.	Name & designation of the authorized signatory to whom reference shall be made	
10.	<p>Present activities/business of the firm</p> <ul style="list-style-type: none"> <li>i. Module Manufacturer</li> <li>ii. Solar Cell Manufacturer</li> <li>iii. Lithium cell</li> <li>iv. System Integrator</li> </ul>	

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11.	Registration number	
	GST No.	
	PAN	
12.	Place & State of billing	
13.	Have the contractor/ firm to pay arrears of income tax? If yes up to what amount?	
14.	Have the contractor/ firm/firms having common director ever been debarred by any Govt. Deptt. /Public Sector Undertakings for undertaking any work?	
15.	Average annual turnover of the bidder for the last three years(Rs. in Lacs)	
16.	The bidder has positive net worth in the previous Financial Year. (Yes/No)	
17.	Experience of the bidder in supply of similar work (verified by any Govt. department/organization)	
18.	Make(s) of Modules offered for the system: (Upload Tie up certificates)	a. ...., b. ...., c. ...., d. .... etc.
19.	Make(s) of Lithium Battery offered for the system: (Upload Tie up certificates)	a....., b. ...., c. ...., d. .... etc.
20.	Make(s) of Luminaries offered for the system: (Upload Tie up certificates)	a. ...., b. ...., c. ...., d. .... etc.
21.	Make(s) of CCTV Camera offered for the system: (Upload Tie up certificates)	a. ...., b. ...., c. ...., d. .... etc.
22.	Name of the any close/near relative working in New &Renewable Energy Department, Haryana or HAREDA	Name Designation Place of Posting Relationship
23.	Litigation history	
24.	Any Other Information	

*We solemnly declare that we will abide by any penal action such as disqualification or black listing or termination of contract or any other action deemed fit, taken by, the Nodal agency against us, if it is found that the information, statements, documents, certificates produced by us are false / fabricated or any information is concealed therein.*

**Date**

**(Signature of Bidder)  
With SEAL**

PERFORMA-IV

**TIE UP CERTIFICATE**  
(from Manufacturer on the letter head of the manufacturer)

We undertake to supply indigenously manufactured modules/Lithium Battery/Luminaire/ CCTV Camera confirming the specifications as per DNIT/tender no. .... Invited by Supplies & Disposals Department Haryana to the ..... (name of bidder) for NRE/HAREDA requirement as and when ordered by the bidder.

Dated:

Authorized Signatory  
(With Seal)

(\* strike out whichever is not applicable)

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PERFORMA-V

LITIGATION HISTORY

Name of bidder

Year	Award for or Against bidder	Name of client	Cause of litigation and matter of dispute	Disputed amount (Current value in Rs.)	Actual awarded Amount (In Rs.)

1. Bidders should provide information on any history of litigation or arbitration resulting from contracts executed in the last five years or currently under execution.

Signature with seal of  
bidder



**PERFORMA-VI**

**NET WORTH (FINANCIAL CAPABILITY)**

Name of bidder

Financial information in Rs. Lakhs	Actual: For financial year 2018-19 ( Rs. In Lakhs)	Actual: For financial year 2019-20 ( Rs. In Lakhs)	Actual: For financial year 2020-21 ( Rs. In Lakhs)
Total assets			
Current assets			
Total liabilities			
Current liabilities			
Profits before taxes			
Profits after taxes			
<b>Net worth</b> (Paid up share capital + reserves & surplus)			
<b>Average Net worth</b> for last Three Years			
Net worth is Positive or Negative			

It is certified that the bidder not suffered losses for any reasons whatsoever in last three Financial Years.

Signature with seal of bidder

Signature with seal of  
Chartered Accountant  
Name:  
M.No.

1. Bidder must fill in the form.
2. The statement of Net Worth is to be certified by a Chartered Accountant.

**PERFORMA-VII**

**UNDERTAKING BY MANUFACTURER OF PV MODULE/ LITHIUM BATTERY/LUMINAIRE/ CCTV CAMERA**  
**( on Non Judicial Stamp Paper of Rs. 10/-)**

I \_\_\_\_\_(Name of Authorized person) \_\_\_\_\_ (designation in the manufacturer company) on behalf of M/s. \_\_\_\_\_  
 \_\_\_\_\_ (Manufacturer of Solar Module/ Lithium Battery/Luminaire/ CCTV Camera ), A company incorporated under the Companies Act, 1956, having its registered office at \_\_\_\_\_  
 \_\_\_\_\_and Factory at \_\_\_\_\_ (hereafter called the Company) has given the undertaking as under:

1. M/s. \_\_\_\_\_ (System Integrator) Represented by \_\_\_\_\_ A company incorporated under the Companies Act, 1956, having its registered office at \_\_\_\_\_ (hereafter called the system integrator) is hereby authorized to install the product /device....  
..... (Solar Module/ Lithium Battery/Luminaire / CCTV Camera) manufactured by the Company, in the State of Haryana in reference to the tender no. .... invited by DGS& D Haryana for New & Renewable Energy Department/HAREDA for supply and installation of the LED Based Solar Street Lighting Systems/ LED Based Solar High Mast Lighting Systems , if name of System Integrator is finalized in the rate contract and orders are received.
2. In case System Integrator defaults at any stage of execution of warrantee/guarantee/CMC and after sale service of the said device, installed in reference to rate contract of the said tender, then the Company will be responsible to execute the warrantee/guarantee/CMC of the product/device ..... (Solar Module/ Lithium Battery/Luminaire / CCTV Camera) at site of installation as per the terms and conditions of rate contract/DNIT of the above tender.
3. In case System Integrator defaults, the Company will adhere the directions of the New & Renewable Energy Department/HAREDA directly.

DATED:

Sign.....  
Name of Authorized person: .....  
Designation of Auth. Person: .....  
Name of Manufacturer Company .....  
With seal

**PERFORMA-VIII**

**Declaration for Comply Solar module as per ALMM compulsory Registration order**

It is certified that *we are aware of binding provisions of the ALMM Order and the List(s) there under, while quoting the rates in the bid.*

Further, the Solar Module to be supplied will be indigenously produced with indigenously manufactured solar PV cells and comply with MNRE guidelines for enlistment under “Approved Models and Manufacturers of Solar Photovoltaic Modules (Requirement of Compulsory Registration) order,2019 and its subsequent amendments at the time of supply. We undertake that the Solar Module will comply the said order while supplying solar module with said item.

Date

(Signature of Bidder)  
With SEAL

**PERFORMA-IX**

**Format for Price bid for LED Based Solar Street Lighting Systems and LED Based Solar High Mast Lighting Systems.**

Sr. No.	Description of System	Base Rate per system with warranty for five years (In Rs,)	Applicable GST (8.9%)	Total rate per system with warranty for five years inclusive of GST at F.O.R sites. (In Rs.)
1.	(i) Supply, installation and commissioning of 12 Watt LED Based Solar Street Lighting System in the State of Haryana with Remote Monitoring System with five years warranty of complete system.			
	(ii) Supply, installation and commissioning of 12 Watt LED Based Solar Street Lighting System in the State of Haryana without Remote Monitoring System with five years warranty of complete system.			
2.	(i) Supply, installation and commissioning of LED Based Solar High Mast Lighting Systems with Solar CCTV Camera with five years warranty of complete system required by New & Renewable Energy Department, Haryana.			

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	(ii) Supply, installation and commissioning of LED Based Solar High Mast Lighting Systems without Solar CCTV Camera with five years warranty of complete system required by New & Renewable Energy Department, Haryana.			
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**Note:** The format of the Technical Bid/ Index for the Technical Bid Documents will be as per Annexure-IA of this document and the bidders are requested to upload their Technical Bids on the Portal with index as provided in Annexure-IA.

**In case of non submission of required Eligibility Documents as at Annexure-IA, the bid of the firm will not be considered and no further chance will be given for the submission of these documents. However, clarification, if any, of already submitted documents may be obtained in case required as per the rules.**

**D. Standard Terms and Conditions** (wherever applicable these terms & conditions will overrule the specific terms and conditions as at Para ‘C’ above):-

1. All the annexure from ‘Annexure-1 to 12’ including ‘Schedule-B of Supply’ as part of this present DNIT are available as ‘Tender Forms’ at Link <http://dsndharyana.gov.in/Portals/0/Tender%20form/Tender%20Forms%2016.12.2020.zip?ver=2020-12-18-122317-777> or the same can be downloaded from home page of <http://dsndharyana.gov.in/en-us/> under ‘Downloads’ > ‘Tender Form’.

2. **Procurement of Stores through Rate Contract System:-**

Where ever Government considers expedient that more than one supplier/ manufacturers should be kept on rate contract, it may so decide on case to case basis subject to conditions available at Annexure ‘I’.

3. **EMD:-**

The firms are required to deposit Earnest Money as indicated above failing which the tenders are liable to be rejected. Manufacturing Micro & Small Enterprises (MSEs) of the State, Startups/ First Generation Entrepreneurs of the State, Central or Haryana Public Sector Enterprises and “approved sources” as declared by the Industries Department, Haryana, are exempt from the deposit of EMD. The condition at Sr. No. 7 of “Instructions to Tenderers of the TENDER FORM” shall be deemed to be amended to this extent as per provisions contained at Para 13(i)(ii) of G.O. No.2/2/2010-4I-BII of dated 28.05.2010 (Annexure-2), Para no 3(A)(ii) of G.O. No. 2/2/2016-4I BII (1) of dated 20.10.2016 (Annexure-3) and Sr. No. 2 of the Table of G.O. No.2/2/2016-4IB-II dated 03.01.2019 (Annexure-4) (or as amended from time to time in this regard)

*The condition at Sr. No. 6 of Annexure “A” - “Conditions with TENDER FORM” shall be deemed to be cancelled. (Amendments with effect from may 28, 2010)*

**4. Performance Security:**

The successful tenderer shall be required to deposit Performance Security Deposit as per provisions contained in Govt. of Haryana G.O. No. DGS&D/Admin/performance Security/2020/8780-8959 dated 14.12.2020 (Annexure-5) as under:-

Sr. No.	Type of Firm/Enterprises	Value of Performance Security Deposit
1	Haryana based firms:- (i) # Haryana Based Micro and Small Enterprises (MSEs)  (ii) Haryana based other firms/enterprises	(i) @0.2% of the value of contract  (ii) @2% of the value of contract
2	Other States/ UTs based firms	@3% of the value of contract
<i># Haryana based MSEs will be eligible for performance security deposit @ 0.2% who have filed SSI Certificate/EM Part-II/Udyog Aadhaar Memorandum (UAM)/Udyam Registration in Haryana and who participate directly in the tendered/quoted items and offering to supply the entire Work/Supply Order by their enterprise.</i>		
The conditions governing the above may kindly be seen in the notification dated 14.12.2020.		

The performance security in excess of the EMD already deposited can be submitted in the shape of Demand Draft/Call Deposit Receipt/Banker’s Cheque or in the shape of equivalent Bank Guarantee of any scheduled bank with branch in Chandigarh/ Panchkula. The condition at Sr. No. 8 of “Instructions to Tenderers of the TENDER FORM” shall be deemed to be amended to this extent as per provisions contained G.O. No. DGS&D/Admin/performance Security/2020/8780-8959 dated 14.12.2020 (Annexure-5) (or as amended from time to time in this regard)

**5. Price Fall Clause:**

Price fall clause will be as per condition no. 15 of “General Conditions of Supply” as available at Annexure-10. The same is that the price quoted in the tender/quotation or approved in the Rate Contract for the stores shall not exceed in any way the lowest price at which the tenderer quote for the supply the stores of identical description to DGS&D, New Delhi/ State Government Institutions/Undertakings/any other person during the delivery period/currency period of the rate contract. If, at any time during the delivery period/currency period, the successful tenderer reduces the rates/sale price of the quoted stores to any person at the price lower than the price chargeable under the supply order/ rate contract, the tenderers should forthwith notify such reduction and inform this office and the price payable under the supply order/contract for the stores supplied after the date of coming into force of such reduction of the rates shall stand correspondingly reduced to that level. The successful tenderers shall promptly notify the reduction of rates to this office as well as to the concerned Indenting Officer/ Consignees. The tenderer shall also give a certificate on their bills that the rates charged by them are not in any way higher to

those quoted by them to the DGS&D, New Delhi and other State Government etc., during the corresponding period. The Indenting Officer shall be required to ensure that requisite certificate is given by the concerned firm on the bills before releasing their payments.

**6. Penalty to firm on Delay in delivery:** Should the contractor fail to deliver or dispatch any consignment within the period prescribed for such delivery or dispatch stipulated in the supply order, the delayed consignment will be subject to 2% penalty per consignment per month recoverable on the value of the stores supplied. The other details will be as per provision contained in Sr. No. 14 of "Schedule-'B' Condition of Contract".

**7.** The bidders are required to quote the basic rates, the delivery/ transportation costs/ applicable GST and duties etc, and the place of billing for the supply of stores clearly and separately. The bidders are required to intimate the place of billing.

**8. Penalty Clause for Department/ Govt. Agencies for delay in Payment**

Delay in payments to the suppliers beyond the stipulated credit period indicated in the supply order, unless supported by cogent reasons and approved by a higher authority, will attract penal interest on the defaulting amount @ Rs. 25/- per rupees one lakh per day of delay beyond the stipulated credit period. Non provision of adequate budget will be no ground for delay in payments to the supplier. This is as per provisions contained at Para 17 of G.O. No.2/2/2010-4I-BII of dated 28.05.2010 (or as amended from time to time in this regard)

**9. Negotiation of Rates**

Regarding negotiations of rates, policy issued by the State Government vide G.O. No.2/2/2010-4-IB-II dated 18.06.2013 (**Annexure-1**), G.O. No.2/2/2010-4-IB-II dated 16.06.2014 (**Annexure-6**), G.O. No.2/2/2010-4-IB-II dated 09.02.2015 (**Annexure-7**) will be applicable.

**10. Concession to MSMEs of State:**

The State Government has notified "Haryana State Public Procurement Policy for MSME - 2016" vide G.O. No. 2/2/2016-4I BII(1) dated 20-10-2016 (**Annexure-3**) and amendment vide G.O. No. 2/2/2016-4IB-II dated 11.12.2019 (**Annexure-8**) which will be applicable in respect of concessions to Haryana based MSMEs and KVIs. For claiming the relevant concession/s like Tender Fee, Earnest Money Deposit (EMD), Turnover, Exemption in respect of Past Performance & Experience, Purchase Preference and Performance Security, the bidders are required to submit the documentary proof from Government authorities showing that they come under Haryana based manufacturing MSME/KVI units as the case may be e.g. \*Entrepreneurs Memoranda in Haryana in bidder's name and further subject to fulfillment of eligibility criteria as provided in the said Policy of 2016. **\*Note:-** To claim the concessions/benefits under the above policy, the bidder is required to submit Manufacturing Entrepreneurs Memorandum issued by the Industries Department Haryana in respect of the quoted item or Udhog Aadhaar Memorandum (UAM) of Haryana based manufacturing enterprises in respect of the quoted item (*Ref. Industries & Commerce Department Haryana Memo No.TS/DS&D/11389-A Dated 03.07.2018*) and further subject to fulfillment of eligibility criteria as provided in the said Policy of 2016 and amendments from time to time.

**11. Concession/benefits to Startups/First Generation Entrepreneurs of State:**

The State Government has notified "Concession/benefits in Public Procurement to Startups/First Generation Entrepreneurs of State" issued vide G.O. No. 2/2/2016-4I B-II

dated 03.01.2019 (**Annexure-4**) which will be applicable in respect of concessions to Startups/First Generation Entrepreneurs of State. For claiming the relevant concession/s like Tender Fee, Earnest Money Deposit (EMD), Turnover, Exemption in respect of Past Performance & Experience, Purchase Preference and Performance Security, the bidders are required to submit the documentary proof as per the said policy.

12. In case of evidence of cartel formation by the bidder(s), the EMD is liable to be forfeited along with other actions as are permissible to Government like filing complaints with the Competition Commission of India and/ or other appropriate forums.

**13. Purchase Preferences for approved Sources**

The Director, Supplies & Disposals, Haryana, reserves the right to allow purchase preference to the approved sources, including Central or Haryana State Public Sector Undertakings/Enterprises, provided that such approved source takes part in the bidding process and the quoted prices of the approved source is within 10% of the lowest acceptable price, other things being equal. However, such purchase preference would be available to the approved source only at the lowest acceptable price. The latest list of Approved Source is contained in Government Order no. 6/03/2007-4IB-II dated: 14-02-2008 of the Industries Department and is subject to further amendment from time to time.

**14. Penalty clause for rejected samples/ material offered by the Bidder:**

In case, the material offered for inspection by the firm fails to meet the specifications stipulated in NIT/Order/Contract and the samples are rejected by the Inspecting Committee, the Indenting Department will have the right to levy a penalty at 0.1% of the total order value. In case, the material offered for inspection fails during the 2nd inspection also, the Indenting Department will have the right to increase the penalty to 0.25% of the total order value. In case, the material offered fails during the 3rd and final inspection also, the firm will be liable for penal action including forfeiture of security, risk purchase, debarring/ blacklisting in future, and no further opportunity for inspection would be provided to the supplier firm.

**15. Grievance Redressal Mechanism for dealing with the representations/ complaints/ letters of the participating bidders/ firms:**

A time bound Grievance Redressal Mechanism for dealing with the representations/ complaints/ letters of the participating bidders/ firms in the tendering process in the State Public Procurement will be governed by State Government Policy issued vide G.O No.2/2/2016-4I-B II of dated 25.07.2016 (**Annexure-9**). All the bidders/ firms who want to make any representation/ complaint against any issue related to their technical scrutiny of the bids may do the same within 5 working days (up to 05:00 P.M. of the Fifth Working day) of the date of issue of letter/ intimation regarding their **As per NIT/ Not as per NIT status**. They have to ensure that their communication is delivered/ reached within 5 working days and delay in postal will not be counted as a valid reason. No representation/ complaint in whatsoever manner from the bidders/ firms will be entertained after the opening of Financial Bid.

- 16. Preference to Make in India:-** The public procurement in the State in reference to “Preference to make in India” shall be governed by Govt. Order No.02/08/2020-4IB-II dated 18.11.2020 (Annexure-11)
- 17. Restriction in Public procurement from bidders of certain Countries:-** The restriction on procurement from bidders from a Country or Countries on grounds of Defense of India or matters directly or indirectly related thereto including National Security shall be governed by Govt. Order No.02/09/2020-4IB-II dated 10.12.2020 (Annexure-12).
- 18. Arbitration Clause**

The Arbitration if any will be decided as per the provision contained at Sr. No.18 of “Schedule ‘B’ Conditions of Contract”
- 19. Jurisdiction**

All disputes will be settled within the jurisdiction of the Head Quarters of Director, Supplies & Disposals, Haryana at Panchkula

#### **E. OTHER TERMS AND CONDITIONS**

1. The firms are required to mention bifurcation of their rates showing the detail of Basic Rates, GST, Duties etc. in their bid. In case, the supplies are delayed by the firm beyond the stipulated delivery period & there has been any upward revision in the rates of GST/ Duties ON THE CONTRACTED ITEM, no such increase will be allowed. However, if there has been any reduction in GST/Duties, the same will be availed. No variation in GST/ Duties on raw material will be applicable.
2. All documents to be submitted by the tenderers with their offer should be self attested in case the same are copies of original documents.
3. The Earnest money of the tenderers will be forfeited to Govt. account and blacklisting/ debarring besides other penal action, if they withdraw their offer/ rates or modify the terms & conditions of the same at any time during the validity of their offer before acceptance.
4. The authorized dealer should submit authority letter of their manufacturer, to quote the rates on their behalf failing which tender is liable to be rejected.
5. When manufacturer as well as its dealer/s both quote the rates in the same purchase case, then for the purpose of distribution of order, they will be considered as one offer & the order/rate contract will be placed on that firm only which has quoted lower rates among such offers & the offer is as per NIT.
6. The Bid i.e. Technical Bid as well as Financial Bid is to be submitted online on web portal <https://etenders.gov.in/eprocure/app>. The Technical Bids uploaded on the portal should have proper indexing and page numbering on all the documents forming the Technical bid. Any supporting documents if required is to be submitted in online mode only along with their Technical Bids by due date and time.
7. The Financial bid/s of only those bidders/ items will be opened who qualify on the basis of their Technical Bids and wherever required approval of samples. The date & time of opening of the Financial bids will be intimated in the due course.
8. The offer without prescribed Earnest Money, Tender Fee & E-Service fee is liable to be summarily rejected. The deficiency in the remaining documents and tender requirement can be made subject to the decision by Director, Supplies & Disposals, Haryana, Panchkula
9. The quantity of Stores can be increased or decreased.



10. Notwithstanding anything contained in the Tender, Supplies & Disposals Department Haryana reserves the right to accept or reject any Bid, and to cancel the bid process and reject the Tender, at any time, without thereby incurring any liability to the affected Bidder or Bidders and without any obligation to inform the participating/affected Bidder (s) the reason for such decision.
11. **Other terms & conditions as contained in various Annexure/ Documents as available under the folder “TENDER FORMS” as available at the link [http://dsndharyana.gov.in/Portals/0/documents/Tender%20Forms%20SnD\\_11042019.zip?ver=2019-06-20-103057-847](http://dsndharyana.gov.in/Portals/0/documents/Tender%20Forms%20SnD_11042019.zip?ver=2019-06-20-103057-847) or the same can be downloaded from home page of <http://dsndharyana.gov.in/en-us/> under ‘Downloads’ > ‘Tender Form’ form part of this DNIT.**
12. **Instructions to bidder on Electronic Tendering System.**  
Registration of bidders on e-Procurement Portal, Information about Digital Certificate, Instructions about Online Payment of Tender Document fee/e-Service Fee/Earnest Money, Important Instructions & Help manual for online bidding and other General issues option available on Home page of NIC e-procurement portal i.e <https://etenders.hry.nic.in>.

In case bidders need any clarifications or if training required to participate in online tenders they can contact office Timings of Help-desk support & Contract Details:-

The detail may be seen under “Contract US” option available on Home Page of NIC e-Procurement portal i.e <https://etenders.hry.nic.in>.

For support related to Haryana Tenders in addition to Helpdesk:-

In addition, For support related to Haryana Tenders in addition to helpdesk you may also contract to following:-

E - mail: eproc.nichry@yahoo.com

Desk: 0172-2700275

Additional Director/ Assistant Director,  
For & on behalf of Governor of Haryana

**Annexure-I**

**TECHNICAL SPECIFICATIONS FOR 12 W WHITE-LED BASED SOLAR STREET LIGHTING SYSTEM**

Sr. No.	Components	Specification for Solar Street light fitting
1	PV module	75 Wp under STC
2	Battery	Minimum 12.8V, 30AH capacity Lithium Ferro Phosphate (LiFePo4) battery.
3	Light Source	<p>White Light Emitting Diode (W-LED)</p> <p>12 Watt, W-LED Luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser.</p> <p>LED Chip should be compliance to IES: LM-80 (Approved Method for Measuring Lumen Maintenance of LED Light Source and LED lumen depreciation time to L70). Test report for same should be submitted.</p>
4	Light Out put	<p>The luminaire must use high efficacy W-LED with minimum 135 lumens per watt (and UV free).[A certificate to be submitted by the System supplier to the Test Lab during certification]</p> <p><b>For single Light level:</b></p> <p>Minimum 24 Lux when measured at a point 4 meters below the light. The illumination should be uniform without dark bands or abrupt variations and soothing to the eye. Higher light output will be preferred.</p> <p><b>For Multiple Light Levels:</b></p> <p>The luminaire should have two levels of light to take care of different lighting needs during the night. Minimum 24 Lux when measured at a point 4 meters below the light (at “High” illumination level). The illumination should be uniform without dark bands or abrupt variations. Minimum 12 Lux at lower illumination level. (Higher light output will be preferred)</p> <p>The luminaire shall be tested for Electrical, Photometry and Color parameters as per IES LM-79:2008 or IS: 16106:2012 for following performance parameters like:</p> <ol style="list-style-type: none"> <li>1. Total luminous flux :<math>\geq</math> 1500 lm.</li> <li>2. Luminous efficacy (i.e. system efficacy): <math>\geq</math> 125 lm/W.</li> <li>3. Color Temperature: Between 5500 K to 6500K.</li> <li>4. CRI <math>\geq</math> 70</li> <li>5. Luminous intensity distribution should follow the batwing</li> </ol>

		<p>patterns in polar curves.</p> <p>6. Require validation report using .ies file, which is generated during luminous intensity distribution test and using maintenance factor 0.9 and pole height of 4m., road width 5m and Pole span 15m. The average illuminance level and uniformity should comply with requirement as per IS 1944, wherever applicable.</p> <p>7. The luminaire should be tested for all type tests as per IS 10322 Part 5 Sect 3 or IEC 60598-2-3 standards.</p>
5	Mounting of light	Pole height 5m above the ground level and 1m below the ground. Luminaire shall be at least 4.5m above the ground level.
6	Electronics Efficiency	Overall Total Efficiency of the Electronics should be Minimum 90%.
7	Duty Cycle	<p>Dusk to dawn:</p> <p>First 4 hours full light (min. 24 Lux), rest of the time at lower light (50%, min.12 Lux) level.</p> <p>(Higher light output will be preferred.</p>
8	Autonomy	3 days or Minimum 36 operating hours per permissible discharge with fully charged Lithium-Ferro Phosphate Battery.
9	Ingress Protection-IP	Optical and Control gear compartment-IP 65/IP 66
10	Impact resistance of casing	$\geq$ IK 08
11	Radiated Emission Test	As per CISPR-15
12	ESD (Electro Static Discharge) and Radiated susceptibility test	As per IEC 61547

**TECHNICAL DETAILS:**

**PV MODULE**

- i. Domestically manufactured PV Module with domestically manufactured solar PV cells should be used.
- ii. The PV modules should be made up of crystalline silicon solar cells and must have BIS certificate for IS 14286& IS 61730 (Part-I, Part II).
- iii. The efficiency of the PV modules should be minimum 15%.

- iv. PV modules must meet the latest specification of MNRE and the models and Manufacturers of PV Modules shall be included in the List of Models and Manufacturers for Solar PV Modules empanelled by MNRE as per its ALMM order (and also valid at the time of supply of material) from time to time. The PV modules used must qualify to the latest BIS standards Crystalline Silicon Solar Cell Modules. In addition, the modules must conform to IS 61730 Part-1 - requirements for construction & Part 2 - requirements for testing, for safety qualification or equivalent IS. The Potential Induced Degradation (PID) test for solar modules will be mandatory as per MNRE conditions.
- v. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminum.
- vi. Other general requirement for the PV modules and subsystems shall be the Following:
  - a. The rated output power and efficiency of any supplied module should not be less than the power and efficiency defined in the bid. No negative tolerance shall be allowed.
  - b. The module shall be provided with a junction box with weather proof lid of sealed type and IP-65 rated.
  - c. I-V curves at STC shall be provided with the module.
- vii. The module should have the following minimum information laminated inside the module.
  - Made in India (to be subscribed in words )
  - Company name /logo
  - Model number
  - Serial number
  - Year of make
- viii. Warranties:
  - a. Material Warranty:
    - i. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures for a period of twenty five (25) years from the date of commissioning of the system
    - ii. Defects and/or failures due to manufacturing (it should indicate the voltage and rated wattage of the module)
    - iii. Defects and/or failures due to quality of materials
    - iv. Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the owner's sole option.
      - b. Performance Warranty:
        - i. The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 year period and not more than 10% after ten years period of the full rated original output.

Note: PV Module/s must have to be supplied as per the latest MNRE guidelines and specifications applicable at the time of supply.

#### **BATTERY**

- i. Minimum 12.8V, 30AH capacity Lithium Ferro Phosphate Battery.
- ii. Battery bank should consist of prismatic LiFePo4 cells of minimum 3.2V (nominal) 10Ah rating.

- iii. Battery pack should have proper 'Battery Management System' (BMS) for cell balancing, over charge and over temperature protection.
- iv. Battery should BIS certified with IS: 16046 (Part-2): 2018 from approved laboratory.

#### **LIGHT SOURCE**

- i. The light source will be a white LED type.
- ii. The colour temperature of white LED used in the system should be in the range of 5500<sup>o</sup> K.
- iii. W-LEDs should not emit ultraviolet light.
- iv. The light output from the white LED light source should be constant throughout the duty cycle.
- v. The lamps should be housed in an assembly suitable for outdoor use.
- vi. The temperature of heat sink should not increase more than 20<sup>o</sup> C above ambient temperature during the dusk to dawn operation.

#### **ELECTRONICS**

- i. The total electronic efficiency should be at least 90%.
- ii. Charge Controller should be MPPT Type.
- iii. Electronics should operate at an appropriate voltage suitable for proper charging of the battery.
- iv. No load current consumption should be less than 20mA.
- v. The PV module itself should be used to sense the ambient light level for switching ON and OFF the lamp.
- vi. The PCB containing the electronics should be capable for solder free installation and replacement.
- vii. Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided.

#### **ELECTRONIC PROTECTIONS**

- i. Adequate protection is to be incorporated under "No Load" conditions e.g. when the lamp is removed and the system is switched 'ON'.
- ii. The system should have protection against battery overcharge and deep discharge conditions.
- iii. The system should have protection against short circuit conditions.
- iv. Protection for reverse flow of current through the PV module(s) should be provided.
- v. Adequate protection should be provided against battery reverse polarity.
- vi. Load reconnect should be provided at 80% of the battery capacity status.

#### **MECHANICAL COMPONENT**

- i. A corrosion resistant metallic frame structure should be fixed on the pole to hold the SPV module.
- ii. The frame structure should have provision so that the module can be oriented at the suitable tilt angle.
- iii. Pole should be Hot dip galvanized pipe as per IS1161 & IS4736 i.e. Class B of outer diameter of 4 inch.
- iv. Pole height 5m above the ground level and 1m below the ground. Luminaire shall be at least 4.5 m above the ground level.
- v. The pole should have the provision to hold the luminaire.

- vi. Pole should have to be grouted in concrete mortar size platform of 1.5ft x 1.5ft x 3ft so that it may bear the wind velocity of 200 Km/Hr.
- vii. The battery shall be either included in the luminaire enclosure, which should be water proof (IP 65) and corrosion resistant or outside the luminaire enclosure in a vented, acid proof and corrosion resistant, hot dip galvanized metallic box (IP 65) with anti-theft locking arrangement for outdoor use.

#### **INDICATORS**

- The system should have two indicators, green and red.
- The green indicator should indicate the charging under progress and should glow only when the charging is taking place. It should stop glowing when the battery is fully charged.
- Red indicator should indicate the battery “Load Cut Off” condition.

#### **QUALITY AND WARRANTY**

- i. The street lighting system (including the battery) will be warranted for a period of five years from the date of commissioning.
- ii. The PV module(s) will be warranted for a minimum period of 25 years from the date of commissioning. The PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of twenty five (25) years.
- iii. The Warranty Card to be supplied with the system must contain the details of the system.

#### **OPERATION AND MAINTENANCE MANUAL**

An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar Street Lighting system. The following minimum details must be provided in the Manual:

- Basic principles of Photovoltaic.
- A small write-up (with a block diagram) on Solar Street Lighting System- its components, PV module, battery, electronics and luminaire and expected performance.
- Type, Model number, Voltage & capacity of the battery, used in the system.
- The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system.
- About charging and significance of indicators.
- Clear instructions about erection of pole and mounting of PV module (S) and lamp housing assembly on the pole.
- Clear instruction on regular maintenance and troubleshooting of the solar street lighting system.
- DO's and DON'T's.
- Name and address of the contact person for repair and maintenance, in case of non-functionality of the solar street lighting system.

**List of BIS standards applicable for components of Solar PV Applications**

Sr. No. (1)	Product (2)	Indian Standard Number (3)	Title of Indian Standard (4)
1.	Crystalline Silicon Terrestrial Photovoltaic (PV) modules (Si wafer based)	IS 14286	Crystalline Silicon Terrestrial Photovoltaic (PV) modules-Design Qualification and type approval
2	Thin Film Terrestrial Photovoltaic (PV) Modules (a-Si, CiGs and CdTe)	IS 16077	Thin-film Terrestrial Photovoltaic (PV) Modules-Design Qualification and Type Approval
3.	PV Module (Si wafer and thin film)	IS/IEC 61730 (Part 1)	Photovoltaic (PV) Module safety Qualification Part 1 Requirements for Construction
		IS/IEC 61730 (Part 2)	Photovoltaic (PV) Module Safety Qualification Part 2 Requirements for testing
4	Power converters for use in photovoltaic power system	IS 16221 (Part 1)	Safety of Power Converters for use in Photovoltaic Power systems Part 1- General Requirement
		IS 16221 (Part 2)	Safety of Power converters for Use in Photovoltaic Power systems Part 2- Particular Requirements for Inverters
5	Storage batteries	IS 16270	Secondary Cells and Batteries for solar Photovoltaic Application General-Requirements and Methods of Test
		IS16046	Standard for Lithium ion battery
6.	LED Lights & Luminaires	IS 16101	General Lighting-LEDs and LED modules-Terms and Definitions
		IS 16102	Self-Ballasted LED lamps for General Lighting services
		IS 16103	Led Modules for General Lighting
		IS 16107	Luminaires Performance

Annexure-II

TECHNICAL SPECIFICATIONS

A Solar PV White- LED High Mast Light consists of white LED luminary of maximum 4 X22 Watt ( LED + Driver) as per configuration along with solar PV modules and battery of given capacity, necessary control electronics-inter connecting wires / cables, module mounting structures etc. to operate the load for dusk to dawn or as per provision in the charge controller. The broad performance specifications of a White Light Emitting Diode (W-LED) light source based solar street lighting system are given below:-



(Photo for reference only)



**BROAD PERFORMANCE PARAMETERS**

PV Module	Only indigenous modules shall be used in the Project. SPV module aggregate capacity 440 Wp (110 Wp X 4 Nos.) at under STC. Module Voc minimum of 21V
Battery ( LiFePO4)	Lithium Ferro Phosphate battery aggregative capacity 12.8 Volt 200 Ah (50Ah x 4 nos) 12.8 Volt 50 Ah of one unit.
Light Source	White Light Emitting Diode (W-LED) 4x22 Watt ( LED +Driver)  Using LEDs which emits ultraviolet light will not be Permitted
Light Out put	White colour (colour temperature 5500-6500 K). Lumen efficacy of LED- min 150 lumens/Watt @350 mA. The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye.  The lumens output of each luminaire should not be less than 2700 lumens.  The lux level over a 16 meter of radius should not be less than 5% at the point mentioned below in the lux level distribution chart. The average Lux should be min 8.0 lux and average/min = min 0.25.  Higher light output will be preferred.
Pole	Pole of hot deep Galvanized Iron Octagonal in single length for 7.0 mtr height
Duty cycle	Dusk to dawn with following inbuilt dimming provision in the Charge Controller :-  First 3 hours full light (min. 8.0 lux), 60% for next 3 hours (min. 5 lux) and rest of time at lower light (50%, min. 4 lux) level.  (Higher light output will be preferred).
Solar CCTV	At least 25% of the installed lights shall be provided with GSM Based remote monitoring with mobile app to track state of charge, runtime, solar voltage etc. and 25% of the installed lights shall be provided with CCTV Camera and separate 4G hotspot power supply for remote surveillance and safety of the citizens in the installed location.  The Solar CCTV Camara shall have the following broad technical specifications :- i. 60 Watt indigenous Crystalline Solar PV Module having domestic cells of minimum 15% efficiency shall be used. ii. Lithium Ferro Phosphate battery of capacity 12.8 V 30 Ah. iii. 2.0 MP 1080 P Wifi IP Camera shall be used. iv. IR Range : 20 m to 100 m v. Lens: 2.8 to 12 mm. vi. High quality material such as toughened glass, EVA, waterproof solar board and aluminium alloy line protecting components for harsh environment shall be used. vii. IR Board: 6 LED array. viii. Confirm to IP :66

	Note: The Solar CCTV should have autonomy for standby recording of minimum 3 days even in cloudy & rainy days.
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**MINIMUM TECHNICAL REQUIREMENTS / STANDARDS**

**SPV MODULES:**

- i. Domestically manufactured PV Module with domestically manufactured solar PV cells should be used.
- ii. The PV modules should be made up of crystalline silicon solar cells and must have BIS certificate for IS 14286& IS 61730 (Part-I, Part II).
- iii. The efficiency of the PV modules should be minimum 15%.
- iv. PV modules must meet the latest specification of MNRE and the models and Manufacturers of PV Modules shall be included in the List of Models and Manufacturers for Solar PV Modules empanelled by MNRE as per its ALMM order (and also valid at the time of supply of material) from time to time. The PV modules used must qualify to the latest BIS standards Crystalline Silicon Solar Cell Modules. In addition, the modules must conform to IS 61730 Part-1 - requirements for construction & Part 2 - requirements for testing, for safety qualification or equivalent IS. The Potential Induced Degradation (PID) test for solar modules will be mandatory as per MNRE conditions.
- v. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminum.
- vi. Other general requirement for the PV modules and subsystems shall be the Following:
  - a. The rated output power and efficiency of any supplied module should not be less than the power and efficiency defined in the bid. No negative tolerance shall be allowed.
  - b. The module shall be provided with a junction box with weather proof lid of sealed type and IP-65 rated.
  - c. I-V curves at STC shall be provided with the module.
- vii. The module should have the following minimum information laminated inside the module.
  - Made in India (to be subscribed in words )
  - Company name /logo
  - Model number
  - Serial number
  - Year of make

- viii. Warranties:
- a. Material Warranty:
    - i. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures for a period of twenty five (25) years from the date of commissioning of the system.
    - ii. Defects and/or failures due to manufacturing (it should indicate the voltage and rated wattage of the module)
    - iii. Defects and/or failures due to quality of materials
    - iv. Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the owner's sole option.
  - b. Performance Warranty: The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 year period and not more than 10% after ten years period of the full rated original output.

Note: PV Module/s must have to be supplied as per the latest MNRE guidelines and specifications applicable at the time of supply.

**LITHIUM-FERRO-PHOSPHATE (LI-FE-PO4) BATTERY:**

1. Battery bank should consist of prismatic LiFePo4 cells of minimum 3.2V (nominal) 10Ah rating.
2. Battery pack should have proper 'Battery Management System' (BMS) for cell balancing, over charge and over temperature protection.
3. Battery should BIS certified with IS: 16046 (Part-2): 2018 from approved laboratory.
4. Capacity of the battery shall not be less than 12.8 V (nominal), 50 Ah at STC, 640 Watt Hour for one unit. The total capacity of battery should be 640x4=2560 Watt Hour.
5. The battery cycle life should be 2000 cycle at 95% discharge.
6. BMS (Battery Management System) should be part of battery pack and battery pack enclosure should be as per standard. The battery pack should be integrated with the system in such way that it is theft proof and not removable from system. It should be installed with combination of module structure/luminaire. The height of battery pack will be approximate, 6.5 meters above the ground.
7. The system must withstand wind velocity of 180 km/hr. The battery pack should be capable of high rate of heat dissipations. The battery box should be acid proof and corrosion resistant, hot dip galvanized metallic box (IP 65) with anti-theft locking arrangement.
8. The battery should operate between temperature range of 0 degree C to 55 degree C. The other feature of the battery should be:

Sr. No.	Description	Specifications
1	Battery Configuration	12.8V- 200AH; Li-fe-PO4 (4x50AH)
2	Working Temperature Range (both for charging & discharging)	0-60 deg C
3	Storage Temperature Range	@ 0-25 Deg- 6 months

4	Cycle Life (Full charge to full discharge@25degCbeforecapacity of battery falls below 75%	more than 2000 Cycles
5	Battery Warranty	5 years
6	Min. Capacity of Individual Cells	3.2V cell of 10 AH, 50AH
7	Type of Cell	Prismatic
8	Nominal Capacity	12.8 volt - 50AH of one unit
9	Nominal Voltage	12.8V
10	Voltage Range	10.5V - 14.6V
11	Total Energy	640 WHr
12	Rated Charging current	25 Amps
13	Maximum Charging current	20 Amps
14	Maximum Discharging Current	25 Amps
15	Discharge Cut off Voltage	>10.5V
16	Over Charge Cut off Voltage	14.4V+/- 0.2V
17	Charging Time	Around 5 - 5.5 Hours

**LIGHT SOURCE:**

1. The light source will be of white LED type The color temperature of white LEDs used in the system should be in the range of 5500 degree K - 6500 degree K. Use of LEDs which emits ultraviolet light will not be permitted. The temperature of heat sink should be not increase more than 20 degree centigrade above ambient temperature during the dusk to dawn operation.
2. The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye. Higher light output will be preferred. The light output from the white LED light source should be almost constant. The lamps, DC-DC driver and battery with battery management system (BMS) should be housed in aluminum die-casted casing suitable for outdoor use and shall comply with IP65.
3. The lamps should be housed in an assembly suitable for outdoor use and shall comply with IP65. The LED housing should be made of pressure die cast aluminum having sufficient area for heat dissipation and heat resistant toughened clear glass/ high quality poly carbonate fitted with pressurized die cast aluminum frame with SS screws.

The temperature of heat sink should not increase more than 30 degree C above ambient temperature even after 48 hrs. of continuous operation. This condition should be

complied for the dusk to dawn operation of the lamps while battery operating at any voltage between the loads disconnect and charge regulation set point.

4. High power LED of minimum 1 watt each capacity capable to withstand maximum 1 amp driving current having lens angle greater than 120 degree shall be used. The LED of reputed make having LM 80 and LM 79 test report shall only be used.
5. The LED efficacy should be more than 135 lumen / watt @ 350 mA, the total luminaire efficacy should not be less than 125 lumens per watt. (Including all losses) i.e the lumens output of each luminaire should not be less than 2750lumens.
6. All LED in circuit must be connected in series only. It must incorporate fail short mechanism in all LEDs. The LEDs used in the luminaire should have life time more than 50,000 hrs.
7. The lumen depreciation of LED shall not be more than 30% even after 50,000 burning hours.
8. Power consumption (input and output) of the each LED Luminaire/Lighting unit shall not be more than 22 W (including LED Driver power loss).
9. The lux level over a 16 meter of radius should not be less than 5% at the point mentioned below in the lux level distribution chart.

The chart is plotted for 6.5 meter high, with lamp bracket arm of 1 meter with 5 degree. Grid spacing 1×1 meter. Maintenance factor 0.8. The average Lux should be min 8 lux and average/min = min 0.25.

10. Other Parameters :

- LED DC current regulation - better than 3 %
  - Input - 12 VDC
  - Driver Type- DC-DC ( as per IEC 62384)
  - CRI - 70 % Typical
  - Lighting quality- Free from glare and flickering and UV
  - Ambient temp- up to 50deg
  - DC to DC convertor efficiency > =90%
11. The connecting wires used inside the luminaries, shall be low smoke halogen free, fire retardant e-beam cable and fuse protection shall be provided at input side.

12. Auto resettable reverse polarity protection shall be provided.
13. LED lighting unit shall comply with LM -79-08 Standards and copy of test certificate should be submitted.
14. The make, model number, country of origin and technical characteristics of white LEDs used in the lighting system must be furnished.
15. The luminaries must have light distribution polar curve. The bidder should submit the polar curve of luminaries in LM 79 report.
16. The luminaire should be tested for all type tests as per IS 10322 Part 5 Sect 3 or IEC 60598-2-3 standards.

**ELECTRONICS**

MPPT charge controller to maximize energy drawn from the Solar PV array. The MPPT charger shall be microcontroller based. The PV charging efficiency shall not be less than 90% and shall be suitably designed to meet array capacity. The charge controller shall confirm to IEC 62093, IEC 60068 as per specifications.

MPPT Charge controller to maximize energy drawn from the solar PV array. The MPPT Charger should be microcontroller based. The charge controller should have:

**SOLAR CHARGE CONTROLLER**

Sr No.	Description	Specification
1	Charge controller Type	MPPT type -Maximum Power point Tracking.
2	Charge controller Rating @ Related Voltage	10 Amps
3	Module Rating	110 Wp @ 16.4 volt $\pm$ 0.2 V, if MPPT is not used with positive tolerance
		36 Cell configuration
		Voc- > 21 Volts
		Vmp-16.4 volt $\pm$ 0.2 at STC without MPPT

- i. Protection against polarity reversal of PV array and battery, Over Current, Short Circuit, Deep Discharge, Input Surge Voltage; Blocking Diode protection against battery night time leakage through PV Module.
- ii. Electronics should operate 21volt and 11.2 volt and its efficiency should be at least 90 %.

- iii. The system should have protection against battery overcharge and deep discharge conditions. The numerical values of the cut off limits of lower voltage should not be less than 11.2 Volt and over voltage cutoff should be 14.6V.
- iv. Full protection against open circuit, accidental short circuit and reverse polarity should be provided
- v. Charge controller shall have automatic dusk-dawn circuit based on SPV module as sensor for switching on/off the high mast light without manual intervention. The sensor must not get triggered by impulse lighting like lightning flashes and fire crackers.
- vi. The self-consumption of the charge controller shall not be more than 20 mA at rated voltage and rated current.
- vii. Adequate protection shall also be incorporated under no-load conditions (i.e. when the system is ON & the load (LED Lamp is removed).
- viii. The system should be provided with 2 LED indicators: a green light to indicate charging in progress and a red LED to indicate deep discharge condition of the battery. The green LED should glow only when the battery is actually being charged.
- ix. All capacitors shall be rated for max. temp of 105°C.
- x. Resistances shall preferably be made of metal film of adequate rating.
- xi. Device shall have adequate thermal margin should be at least 25 degree below the allowable junction temperature while operating at an ambient temperature of 55 degree C and full load.
- xii. Fibre glass epoxy of grade FR 4 or superior shall be used for PCB boards.

Preferably the electronics (both charge controller and driver) should be housed in a box and installed on pole suitably in order to perform the repairing of electronics quickly without removing the whole luminaire.

#### TECHNICAL REQUIREMENT/STANDARDS

Item / System	Applicable BIS /Equivalent IEC Standard Or MNRE Specifications	
	Standard Description	Standard Number
Solar PV Systems	Crystalline Silicon Terrestrial PV Modules	IEC 61215 edition II / BIS 14286 and IEC 61730 part-1 and part-2
Charge Controller/MPPT		Test Certificates / Reports from IECQ / NABL/ MNRE accredited laboratory for relevant IEC / equivalent BIS standard.
Units and Protections		IEC 62093 Equivalent BIS Std.
Storage Batteries	LiFePo4	Tested as per IS 16046 (Part 2):2018
Cables	General Test and Measuring Method PV insulated cables for working voltage up to and	IEC 60189 IS 694/ IS 1554 IS/IEC 69947

	including 1100 V UV resistant for outdoor installation	
Luminaries and Charge Controller housing		IP65
LED	LED performance	LM -80-08
	Luminary performance	LM 79-08

### MECHANICAL HARDWARE

1. A galvanized metallic frame structure to be fixed on the pole to hold the SPV module(s). The frame structure should be fixed at 30 degree from horizontal facing true south.
2. The pole should be hot deep Galvanized Iron Octagonal pole in single length for 7.0 mtr. height as per specification as under:
  - i. The Octagonal poles shall be hot deep galvanized. The material of pole shall be as per specification of BS EN 100025, ISO 1461.
  - ii. The size of the pole shall be min 75 mm at Top side, 150 mm at bottom side with thickness of 4 mm minimum.
  - iii. The base plate of pole shall be of size 260 X 260 X 18 mm duly welded to pole.
  - iv. Pole should have the arrangement at top for mounting of Solar panel of design capacity with mounting structure at an angle of latitude  $\pm 2^0$  degree.
  - v. The four LED luminaire shall be mounted on this pole at height of 6.5 meter from pole bottom.
  - vi. The pole shall be mounted on suitable RCC foundation at least 1.25 meter deep and 0.5 meter above ground with 4/6/8 bolt of min 20 mm size.
  - vii. The Nut -Bolts in battery box and panel structures should be proper riveted to ensure the theft.

### BATTERY BOX:

The battery box should be corrosion resistant, hot dip galvanized metallic box (IP65) with anti-theft locking arrangement. The size of box should be as per battery pack size. The battery box is to be properly rest/mounted on pole approx. 6.5 meters of height from ground level. The edges of box should be turned properly to give smooth edge and good strength. Components and hardware shall be vandal and theft resistant. All parts shall be corrosion-resistant.

### ELECTRIC CABLE



The electric cable used shall be twin core PVC insulated water and UV resistance copper cable of minimum size 1.5mm thickness. Cable shall meet IS 1554 / 694 Part1:1988 & shall be of 650 V/ 1.1 kV.

#### OTHER FEATURES

A toll free number of IVRS of HAREDA and 14 digit UID number of minimum computer font size 72 or 13 mm (issued/provided by HAREDA) is to be embossed/ punch on pole between 1-1.5 meter above from ground level 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 noncompliance 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 telescopic octagonal pole 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 of 180 kmph. The pole should be rest on a suitable foundation. (RCC Foundation with iron rings size 600 mm x600 mm x 1250 mm deep and 500 mm above the ground level. must have 4/6/8 nos. foundation bolts of 1200 mm & 20mm dia.) Adequate space should be provided behind the PV module/array for allowing un-obstructed air flow for passive cooling. Cables of appropriate size should be used to keep electrical losses to a bare minimum. Care should be taken to ensure that the battery is placed with appropriate leveling on a structurally sound surface. The control electronics should not be installed directly above the battery. 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 supply but required for proper installation and efficient operation of the SPV systems is to be provided by the manufacturer as per standards.

#### 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 systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years. The warranty & maintenance is elaborated as under:-

- The PV modules will be warranted for a minimum period of 25 years from the date of supply. (Output wattage should not be less than 90% at the end of 20 years and 80% at the end of 25 years).
- The mechanical structures, electrical components including battery and overall workmanship of the Solar PV White- LED High Mast Light Systems must be

warranted for a minimum of 5 years from the date of commissioning and handing over of the system..

- The Comprehensive Maintenance (within warranty period) shall be executed by the firm themselves or through the authorized dealer/ service center of the firm in the concerned district.
- Necessary maintenance spares for five years trouble free operation shall also be supplied with the system.
- The contractor/ bidder shall be responsible to replace free of cost (including transportation and insurance expenses) to the purchaser whole or any part of supply which under normal and proper use become dysfunctional within one month of issue of any such complaint by the purchaser.
- The service personnel of the Successful Bidder will make routine quarterly maintenance visits. The maintenance shall include thorough testing & replacement of any damaged parts Apart from this any complaint registered/ service calls received / faults notified in the report generated by the IVRS should be attended to and the system should be repaired/ restored/ replaced within 3 days.
- A separate Service & Maintenance passbook shall be maintained of the supplied systems as per the format provided by HAREDA. The deputed personnel shall be in a position to check and test all the components regularly, so that preventive actions, if any, could be taken well in advance to save any equipment from damage. Any abnormal behavior of any component shall be brought to the notice of HAREDA for appropriate action.
- Normal and preventive maintenance of the Solar PV White- LED High Mast Light systems such as cleaning of module surface, topping up of batteries, tightening of all electrical connections, cleaning & greasing of battery terminals, also the duties of the deputed personnel during quarterly maintenance visits.
- During operation and maintenance period of the Solar PV White- LED High Mast Light systems, if there is any loss or damage of any component due to miss management/miss handling or due to any other reasons pertaining to the deputed personnel, what-so-ever, the supplier shall be responsible for immediate replacement/rectification. The damaged component may be repaired or replaced by new component.

#### 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. Engraving (or) Screen printing of HAREDA with logo at a suitable place on the main components viz., SPV Panel, Battery, LED Lighting Units to be used in the installation of the solar high mast lighting systems.

- b. The unique system ID number as provided by HAREDA shall be embossed or punch or permanently riveted on each pole and battery box of the system. The UID number painting or marking will not be allowed.

**Annexure-IA**

**Technical Bid format/ Index for the Technical Bid documents**

(Tenders will be technically evaluated based on the sequence/index as per the details given below. In case the firm fails to provide the documents properly as per the Technical Bid format/Index/proper page numbering, bid of the firm can be rejected)

Sr. No.	Name of Document	Status of Submission (Yes/No)	Page Number as per numbering given to the technical bid documents uploaded on the portal
1	Submission of online payments i.e Earnest Money Deposit, Tender Document Fee & e - Service Fee and scanned copies of supporting documents.	Yes/ No	
2	All the documents submitted by the bidder as part of its Technical Bid are attested by the signing authority of the bidder	Yes/ No	
3	An undertaking by the bidding firm in reference to acceptance of all the terms & conditions of the Schedule-A/ DNIT	Yes/ No	
4	Submit a signed copy of DNIT	Yes/ No	
5	Name of the quoted items for which bidder to be participated. To submit an undertaking	Yes/ No	
6	The Bidder should be either a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto or proprietary/partnership/LLP firm. A copy of certificate of incorporation shall be furnished along with the bid in support of above.	Yes/ No	
7	The bidder should be a manufacturer of solar modules/solar cells/Lithium battery or System Integrator. The System Integrator has to submit the undertaking issued by each manufacturer of major parts/devices (solar modules, battery, luminaire and CCTV Camera) to be used in systems with whom they have tie up mentioning as per Condition C (I) at Para 2(a) & (b) of the DNIT.	Yes/ No	
8	<b>For LED Based SPV Street Lighting Systems :</b>  The bidder has to submit Test report of the complete	Yes/ No	

**SUPPLIES & DISPOSALS DEPARTMENT, HARYANA**  
**S.C.O. No. 09, 1<sup>st</sup> & 11<sup>nd</sup> Floor, Sector-16, Panchkula-134109 (Haryana)**  
**Ph.:- 0172-2570121, 123, 124. Fax No.:- 0172-2570122.**  
**e-mail:- supplies@hry.nic.in , website:- dsndharyana.gov.in**

	system in its name issued by any of the MNRE / BIS /IEC/ NABL accredited laboratory on or after 01.04.2018. Bid without valid test report from MNRE / BIS /IEC/ NABL accredited laboratory will be rejected out rightly. The test report should contain the make and model of major components i.e. module, battery and Luminaire along with their photograph.		
9	<b>For LED Based Solar High Mast Lighting Systems:</b>  The bidder has to submit Test report of one unit (110 watt module, 22 Watt LED Luminaire, 12.8 Volt 50 Ah LiFePO4 battery and Solar CCTV Camera) of LED Based Solar High Mast Lighting System in its name issued by any of the MNRE / BIS /IEC/ NABL accredited laboratory on or after 01.04.2018. Bid without valid test report from MNRE / BIS /IEC/ NABL accredited laboratory will be rejected out rightly. The test report should contain the make and model of major components i.e. module, battery, Luminaire and Solar CCTV Camera along with their photograph.	Yes/ No	
10.	Bidder to submit information along with documents in support of condition at Para C (I) 4 of the DNIT i.e. declaration and <i>acknowledgement for the same</i> .	Yes/ No	
11	The manufacturing firm should have a valid ISO 9001:2015 Certificate in the field of quoted item. Submit a copy of NABCB approved ISO 9001:2015 Certificate	Yes/ No	
12	The Bidder should have valid GST registration certificate of the billing state. Submit a copy of GST no and PAN no.	Yes/ No	
13	The bidder should have not been debarred /blacklisted from any Central/ State Govt. Department/ Agency. i.e. Bidder should not be under debarring at the time of submission of bid. Bidder shall submit an Affidavit on non judicial stamp paper duly attested by the notary stating that the bidder has not been debarred/ blacklisted from any Central/ State Govt. Department/ Agency for the quoted item(s).	Yes/ No	
14	The Successful Bidder shall be required to establish at least one Service Centre at Divisional Level in their area of operation in Haryana. The successful bidder should maintain the inventory of required spare parts at the service centre(s). To submit an undertaking.	Yes/ No	
15	Bidder should have minimum average annual turnover	Yes/ No	

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	of Rs. 630.00 Lakhs in the last three years, ending 31 <sup>st</sup> March of the previous Financial Year i.e. up to 2020-2021.		
16	Experience and Past Performance of having successfully completed similar contracts i.e. Solar Street Light/ Solar Home Light costing not less than Rs. 840.00 Lakhs during last three years ending 31st March of the previous Financial year (2020-2021), to Govt./ Semi Govt. Organizations.	Yes/ No	
17	The bidder should have positive net worth in the previous last three Financial Year i.e. upto 2020-21. <i>(Document to be uploaded: Certificate in given format</i>	Yes/ No	
18	Bidder is required to submit a sample of the quoted item along with tender as per condition at Para C (I) 14 (a) & (b). Non-compliance shall in rejection of the bid.	Yes/ No	
19	Technical Catalogue of the product is required to be submitted along with the bid & same should be available on bidder's website.	Yes/ No	
20	The firm (s) tendering shall clearly mention in their tender whether any of the close/near relative of their management/ management of sister concerned firms is in the employment of the HAREDA/Department of New & Renewable Energy, Haryana and in case their close/near relative is in employment of the HAREDA/Department of New & Renewable Energy, Haryana then his/her name, designation and place of posting to be mentioned. <b>To submit an undertaking along with required information as per condition at Para C(I) 27 of the DNIT.</b>	Yes/ No	