Short Tender Document

for

Supply, Installation & Commissioning of 608 Nos of 200 Wp Capacity Stand alone Solar Power Packs and 18 W LED based Solar Street Lighting Systems at Annavaram Gram Panchayat (consisting of 7 Villages) of Bheemili Mandal

in

Visakhapatnam District

NAME OF THE SUPPLIER / MANUFACTURER: ----------

Registration No: _____ / 2017-18

Tender Notice No:

NREDCAP/SE/VSKP/06/ANNAVARAM/2018-19
Dated: 30.04.2018.

NEW AND RENEWABLE ENERGY DEVELOPMENT CORPORATION OF A. P. Ltd.
(NREDCAP)
Regd Office: 12-464/5/1, River Oaks Apartments,
CSR Kalyana Mandapam Road, Tadepalli,
GUNTUR DISTRICT- 522 501
TEL: 08645-797162, 797163
Website: www.nredcap.in

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TENDER NOTICE

S.No	Particulars	Details
1	Tender Notice No	NREDCAP/SE/VSKP/06/ANNAVARAM/2018-19, Dated: 30.04.2018
2	Scope of the work	Supply, Installation & Commissioning of 608 Nos of 200 Wp Capacity Stand alone Solar Power Packs and 150 Nos of 18W LED based Solar Street Lighting Systems at Annavaram Gram Panchayat (consisting of 7 Villages) of Bheemili Mandal in Visakhapatnam District
3	Eligibility for participation	Registered / Renewed Suppliers & Manufacturers with NREDCAP for the year 2017-18 as "SPV Solar System Integrators"
4	Processing fee of Tender Document	Rs. 20,000/- + 3,600/- (GST @ 18%) = Rs. 23,600/-
6	Amount of EMD	Rs. 1,00,000/- (Rupees One lakh only) by way of Demand Draft drawn in favour of NREDCAP, payable at Tadepalli
7	Last Date & Time for Submission of sealed Tenders	14.05.2018, 13:00 Hrs
8	Date & Time for Opening of Technical Bids	14.05.2018, 15:00 Hrs

NOTE:

1. The Tender Document can be downloaded from http://www.nredcap.in, through open tender and the processing fee of tender document shall be enclosed by way of demand draft for Rs: 23,600/- in favour of NREDCAP Ltd., payable at Tadepalli.
2. The Financial Bids of Technically qualified Bidders will only be opened.
3. The Valid NSIC certificate holders are exempted from payment of EMD amount only which shall be enclosed to the tender document.

Sd/-
VC & Managing Director
NREDCAP, Tadepalli

SCOPE OF THE WORKS

A) Supply, Installation and Commissioning of 608 Nos of 200Wp Capacity Solar Photo Voltaic Power Packs along with 3 Nos of 14Watt LED Bulbs & 1 No of 75Watt Ceiling Fan and 150 Nos of 18W capacity LED based Solar Street Lighting Systems at 7 (Seven) villages of Annavaram Gram panchayat in Bheemili Mandal of Visakhapatnam in the State of Andhra Pradesh. The list of villages / hamlets are placed at **Annexure-A.** The details of Load particulars of each household is as follows.

A) 200Wp Solar Power Pack: (Load details)

1. 3 LED Bulbs
2. One Ceiling Fan

Assuming the power requirement is @ 4 hrs per day, the estimated capacity of SPV Power pack is arrived as below for each location.

S. No	Description of device	Power in Watts	Quantity (Nos)	No. of hours per day	Total Watt hours/day
1	LED Bulbs	14	3	4	168
2	Ceiling Fan	75	1	4	300
Total					**468**

Total Load: 0.468 KWh /day.

Since 200Wp SPV Power Pack will generate around 1 KWhr per day, the capacity of power pack required for each Household is 200Wp with 2 days autonomy.

B) 18W Capacity LED based Solar Street Lighting Systems:

The proposed Solar Street Lighting Systems are to be installed in the villages of Bheemili mandal of Visakhapatnam District at the locations finalized by District Manager, NREDCAP, Visakhapatnam.

Signature of the Tenderer with seal

Pre-Requisites for submission of Tenders for Supply, Installation & Commissioning of 200Wp Capacity Stand alone Solar Power Packs and 18W Capacity LED Solar Street Lights at 7 (seven) villages of Annavaram Gram Panchayat of Bheemili mandal in Visakhapatnam District.

Tenders are invited for Supply, installation & commissioning of 200Wp Capacity Stand alone Solar Power Packs and 18W Capacity LED Solar Street Lights at 7 villages of Annavaram Gram Panchayat of Bheemili mandal in Visakhapatnam District from the **Registered / Renewed Suppliers & Manufacturers** with NREDCAP for the year 2017-18 as **"SPV Solar System Integrators"**.

The Tenderers shall fulfill the following eligible criteria and submit the necessary documentary proofs along with Tender document.

1. The Suppliers & Manufacturer's shall have valid Test Certificates for all products / Components from MNRE or any other MNRE authorized Test Centers to install Solar Power Packs & Solar Street Lighting Systems as per MNRE Specifications.
2. The Suppliers & Manufacturers shall have experience in installation of at least 10 KWp Capacity cumulative stand alone Solar Power Packs & 50 Nos of Solar Street Lighting Systems with NREDCAP or any of the Govt. Nodal Agencies in the country during the last two years 2016-17 & 2017-18.
3. The Suppliers & Manufacturers annual turnover shall not be less than Rs: 25.00 Lakhs (Rupees Twenty Five Lakhs only) towards supply & installation of solar power packs & Solar Street Lighting Systems during last two years i.e., 2016-17 and 2017-18.
4. The Suppliers & Manufacturers should have service centres in the state of Andhra Pradesh at least for the last one year period i.e., 2017-18 and shall enclose the list.
5. The Suppliers & Manufacturers have not been black listed at any time by NREDCAP as well as any of the Govt. Nodal Agencies in the country.
6. The Bidder who submits the tender without satisfying or deviating the above conditions will be rejected duly forfeiting the EMD amount.

Signature of the Tenderer with seal

GENERAL CODITIONS OF THE SHORT TENDER DOCUMENT:

1. The rates are inclusive of all latest prevailing taxes and duties etc., of Govt. of Andhra Pradesh as well as Govt. of India. The rates quoted shall also be inclusive of all the charges such as transportation, Installation & Commissioning of the systems and to be submitted in the enclosed format of **Annexure – D&E.**
2. All the Systems are to be supplied, installed and commissioned as per the directions of **District Manager, NREDCAP, Visakhapatnam** within 45 days from the date of work order.
3. The filled in Tender document duly signed on each page has to be submitted along with **EMD amount of Rs. 1,00,000/-** (Rupees one Lakh only) by way of Demand Draft in favour of "NREDCAP" Payable at Tadepalli. In case of unsuccessful bidder, the EMD amount will be refunded immediately after finalization of the Tender.
4. The successful bidder shall pay the **Security Deposit** amount of Rs. 2,00,000/- (Rupees Two Lakhs only) for both the items @ Rs.1,00,000/- each and will be released on successful completion of the works allotted.
5. The bidder has to visit the villages in Annavaram Gram Panchayat of Bheemili (M) of Visakhapatnam District for assessment and submit the report along with the tender document.
6. The filled in Tender document together with all enclosures should be submitted in a sealed cover super scribing **"Tender for SPV Power Packs & Solar Street Lighting Systems for Annavaram GP, Bheemili Mandal of Visakhapatnam District".**
7. Good quality components should be supplied. In case if it is found that materials are not as per MNRE Specifications, such components are to be replaced at free of cost.
8. All the Systems including Battery should be under guarantee / warranty for a period of **Five years** from the date of commissioning against all defects.
9. After completion of project, the supplier / manufacturer has to submit the Installation & Commissioning report containing the details of the components installed, layout diagram, copies of the test certificates for SPV Modules, Invertors, Batteries etc.

Signature of the Tenderer with seal

10. 200Wp Solar Power Packs & Solar Street Lighting Systems will be allotted to the bidders who stands at L1 rates for the respective systems, separately.

11. The bills are to be raised in favour of NREDCAP by suppliers / manufacturers with **GS TIN number as per GST Act in force w.e.f. 01.07.2017** and submit in triplicate after duly handing over the systems to the concerned Households / Gram Panchayat.

12. 90% Cost of the Solar Power Packs & Solar Street Lighting Systems installed will be released on receipt of the bills and handing over certificate from concerned. The balance 10% Performance guarantee amount will be released against Bank guarantee (or) after completion of guarantee / warranty period of 5 (five) years.

13. The payments to the suppliers shall be made only after deduction of TDS under income Tax act against the invoices generated as per GST Act.

14. NREDCAP reserves the right to cancel the order partially or fully in case the material supplied are substandard / delay in progress of the works without any notice and forfeit the EMD amount paid.

15. For the delayed installation beyond the stipulated period, penalty @1% on the cost of the systems per week will be levied subject to the maximum of 5%. For valid reasons, if the supplier is not able to supply the systems within the time prescribed, the VC & Managing Director on receipt representation from the supplier prior to due date, may grant extension of time. If the work is not completed within one month beyond scheduled date, the entire work will be cancelled and the EMD paid will be forfeited.

16. The VC & Managing Director may relax any of the conditions for valid reasons and the decision of VC & Managing Director is final and binding.

Signature of the Tenderer with seal

PROFILE OF SUPPLIERS / MANUFACTURERS

S.No	Particulars	Details	
1	Name of the Tenderer		
2	Postal Address		
3	Email address for communication		
4	Telephone, Fax No:		
5	Name, designation & Contact number of the representative of the Tenderer.		
6	Nature of the firm (Individual Partnership/Pvt. Ltd/ Public Ltd., Co. /Public Sector etc.,)		
7	Amount paid towards Tender processing fee with details		
8	Amount paid towards Earnest money deposited with details		
9	Annual Turnover for last Two financial years 2016-17 & 2017-18 (Attach balance sheets from certified Chartered Accountant)	2016-17 (Rs)	2017-18 (Rs)
10	PAN Number, GS TIN Number along with Registration details (evidences are to be attached)		
11	Details of Test Certificate(s) issued by MNRE/MNRE authorized test centers. a. Name of the Test Center b. Valid Test Certificate for the following components i) SPV Modules ii) Batteries iii) Solar Inverter		

Signature of the Tenderer with seal

A) SPECIFICAIONS FOR 200 Wp CAPACITY SOLAR POWER PACK ALONG WITH 3 NOS OF 14WATT LED BULBS & 1 NO OF 75WATT CEILING FAN WITH REQUIRED WIRING INCLUDING HOLDERS & SWITCHES.

Location of site	7 villages of Annavaram Gram Panchayat in Bheemili mandal of Visakhapatnam District (list enclosed)
Hours of Operation	4 to 5 hrs per day
SPV Modules (with suitable module mounting structure)	
Total SPV modules Capacity	200 Wp
Type of Modules	Crystalline silicon - IEC/MNRE approved
Battery (fitted in suitable MS Rack)	
Battery Type	Lead Acid - IEC/MNRE approved
Battery voltage	24V / 12V
Battery capacity @ C/10 rating	75 AH / 150 AH
Solar Charge Controller	
Rating	12 V, 20 Amps (or) 24V, 10 Amps
Solar Inverter (fitted in suitable MS Rack)	
Rating	12V / 24V, 300VA, Pure Sine wave (THD<5%)
Enclosures	Indoor / M.S.Rack floor mounted
Other Accessories	
Cables	BIS Copper Conductors
Module mounting Frame	MS Galvanized

B) COMPONENT WISE MNRE TECHNICAL DETAILS

PV MODULE:

i) Indigenously manufactured PV modules should be used.
ii) The PV modules should be made up of crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.
iii) **The module efficiency should not be less than 14%.**
iv) The terminal box on the module should have a provision for opening, for replacing the cable, if required.

Signature of the Tenderer with seal

v) There should be a Name Plate fixed inside the module which will give:
   a. Name of the Manufacturer or Distinctive Logo.
   b. Model Number
   c. Serial Number
   d. Year of manufacture

vi) A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.

BATTERY:

i) The battery should be Lead Acid.
ii) 75 % of the rated capacity of the battery should be between fully charged & load cut off conditions.
iii) Battery should conform to the latest MNRE/ BIS/ International standards.

LIGHT SOURCE:

i) The luminaries should use white LEDs. The colour temperature of white LEDs should be in the range of 5500^{o} K – 6500^{o}K. Use of LEDs which emit ultraviolet light will not permitted.
ii) The light output from the white LED light source should be constant through-out the operation of the lights.
iii) The lamps should be housed in an assembly suitable for indoor use with an appropriate heat sink to dissipate the heat generated by LEDs during operation. The temperature of LED should not increase more than 10^{o} above room temperature. This condition should be complied for 5 hours of operation of the lamp at a stretch while battery operating at any voltage between the loads disconnect and the charge regulation set point.
iv) The luminaries must use the optics and diffuser in order to have uniform and glaze free light.
v) The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of white LEDs used in the lighting system must be furnished along with the system.
vi) All Luminaries should have a built in ON/OFF switch and fuse.

ELECTRONICS:

i) Electronics should operate at 12 / 24 V and should have adequate temperature compensation arrangement for proper charging of the battery throughout the year.
ii) Inverter should be with "THD" less than 5% and Efficiency more than 90 %.
iii) Necessary lengths of wires / cables, switches and fuses should be provided.

Signature of the Tenderer with seal

iv) The system should have separate ports for connecting each load along with a charging port for mobile and laptop.

v) The idle current i.e. when there is no load (& inverter is switched OFF, in case of A.C. Systems) and no display, it should be less than 150 mA.

vi) The voltage drop from module terminals to the battery terminals should not exceed 1.0 volts including the dropage across the diode and the cable when measured at maximum charging current.

vii) The PCB containing the electronics should be capable of solder free installation and replacement'

viii) Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided.

ix) The inverter output AC voltage should not change with the decreased battery voltage in the operating voltage range of the battery.

ELECTRONIC PROTECTIONS

i) Adequate protection is to be incorporated under "No Load" condition, e.g. when the lamps and other loads are removed and the system is switched ON.

ii) The system should have protection against battery overcharge, deep discharge condition.

iii) Load reconnect should be provided at 90 % of the battery capacity status.

iv) Adequate protection should be provided against battery reverse polarity.

v) Fuses should be provided to protect against short circuit conditions.

vi) Protection for reverse flow of current through the PV module(s) should be provided.

MECHANICAL COMPONENTS

i) Corrosion resistant frame structure should be provided to hold the SPV module.

ii) The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angle.

iii) Light source should be either for wall mounted or ceiling mounted or can be hung from the ceiling in a stable manner, as per site requirements.

iv) A vented plastic/ wooden/ metallic box with acid proof corrosion resistant paint for housing the storage battery indoors should be provided.

INDICATORS:

i) The system should have two indicators, green and red.

ii) 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.

iii) Red indicator should indicate the battery "Load Cut Off" condition

Signature of the Tenderer with seal

QUALITY AND WARRANTY:

(i) The Solar home system including Battery will be warranted for a period of five years from the date of supply.

(ii) The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. PV modules used in Solar Home Lighting 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.

(iii) The Warranty Card to be supplied with the system must contain the details of the system**.** The manufacturers can also provide additional information about the system and conditions of warranty as necessary.

OPERATION and MAINTENANCE MANUAL:

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

i) Basic principles of Photovoltaics.

ii) A small write-up (with a block diagram) on Solar Home Lighting System - its components, PV module, battery, electronics and luminaire and expected performance.

iii) Significance of indicators.

iv) Type, Model number, voltage & capacity of the battery, used in the system.

v) The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system must be indicated in the manual.

vi) Clear instructions about mounting of PV module(s).

vii) Clear instructions on regular maintenance and trouble shooting of the Solar Home Lighting System.

viii) DO's and DONT's.

ix) Name and address of the contact person for repair and maintenance.

Signature of the Tenderer with seal

C) SPECIFICAIONS FOR 18 W CAPACITY LED BASED SOLAR STREET LIGHTING SYSTEMS

Location of site	7 villages of Annavaram Gram Panchayat in Bheemili mandal of Visakhapatnam District (list enclosed)
SPV Modules	
Total SPV modules Capacity	90 Wp under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Battery (fitted in suitable box with lock & key)	
Battery Type	Lithium Ion
Battery voltage	14.8V
Battery capacity	15.6 AH
Mounting of Light	GI Pole mounted, minimum 5 mtrs above the ground level
Light Source	
Rating	18W White Light Emitting Diode (W-LED), W-LED Luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser.
Other Accessories	
Electronics	Overall total efficiency of the Electronics should be minimum 90%
GI Pole	6 mtrs height
Civil Foundation	Suitable to withstand higher wings for the bottom 1 mtr pole

D) COMPONENT WISE MNRE TECHNICAL DETAILS

PV MODULE:

i. Indigenously manufactured PV module should be used.

ii. The PV module should have crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.

iii. The power output of the module(s) under STC should be a minimum of 90 Wp at a load voltage* of 16.4 ± 0.2 V.

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iv. The open circuit voltage* of the PV modules under STC should be at least 21.0 Volts.

v. **The module efficiency should not be less than 14 %.**

vi. The terminal box on the module should have a provision for opening it for replacing the cable, if required.

vii. There should be a Name Plate fixed inside the module which will give:

   a. Name of the Manufacturer or Distinctive Logo.
   b. Model Number
   c. Serial Number
   d. Year of manufacture

viii. A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.

*****The load voltage and Voc conditions of the PV modules are not applicable for the system having MPPT based charge controller

BATTERY:

i. Lithium Ion Battery.
ii. The battery will have a minimum rating of 14.8V, 15.6 Ah Lithium-ion Battery bank (24 Nos of 3.7 V x 2600 mAh Li-ion batteries connected in series and parallel)
iii. 85 % of the rated capacity of the battery should be between fully charged and load cut off conditions.
iv. Battery should conform to the latest MNRE/ BIS/ International standards.

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 $5500^{o}K–6500^{o}K$.
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 $20^{o}C$ above ambient temperature during the dusk to dawn operation.

ELECTRONICS:

i. The total electronic efficiency should be at least 85%.
ii. Electronics should operate at 12 V and should have temperature compensation for proper charging of the battery throughout the year.
iii. No Load current consumption should be less than 20 mA.

Signature of the Tenderer with seal

iv. The PV module itself should be used to sense the ambient light level for switching ON and OFF the lamp.
v. The PCB containing the electronics should be capable of solder free installation and replacement.
vi. 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. Fuse should be provided to protect against short circuit conditions.
iv. Protection for reverse flow of current through the PV module(s) should be provided.
v. Electronics should have temperature compensation for proper charging of the battery throughout the year.
vi. Adequate protection should be provided against battery reverse polarity.
vii. Load reconnect should be provided at 80% of the battery capacity status.

DUTY CYCLE:

Dust to Dawn with Autonomy of 3 days or 42 operating hours permissible discharge.

MECHANICAL COMPONENTS:

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 to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angle.
iii. The pole should be made of Galvanised Iron (GI) pipe.
iv. The height of the pole should be 4 metres above the ground level, after grouting and final installation.
v. The pole should have the provision to hold the luminaire.
vi. The lamp housing should be water proof and should be painted with a corrosion resistant paint.

INDICATORS:

(i) The system should have two indicators, green and red.

Signature of the Tenderer with seal

(ii) 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.

(iii) 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 supply.

ii. The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. 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:

(i) Basic principles of Photovoltaics.

(ii) A small write-up (with a block diagram) on Solar Street Lighting System - its components, PV module, battery, electronics and luminaire and expected performance.

(iii) Type, Model number, Voltage & capacity of the battery, used in the system.

(iv) The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system.

(v) About Charging and Significance of indicators.

(vi) Clear instructions about erection of pole and mounting of PV module (s) and lamp housing assembly on the pole.

(vii) Clear instructions on regular maintenance and trouble shooting of the Solar Street Lighting System.

(viii) DO's and DONT's.

(ix) Name and address of the contact person for repair and maintenance, in case of non-functionality of the solar street lighting system.

Signature of the Tenderer with seal

Annexure –A

The list of villages / hamlets in Bheemili mandal of Visakhapatnam District are proposed for installation of 200Wp Solar Power Packs and 18W Capacity Solar Street Lighting Systems

Name of the Habitation	Number of Households (Nos)
Annavaram	89
Gollapalem	30
Harijanawada	17
Yerrayyapalem	328
Pylipeta	46
Kottagollapalem	43
Tethapeta	52
Schools	03
Total	**608 Nos**

Signature of the Tenderer with seal

Annexure – B

TECHNICAL BID

A) TECHNICAL SPECIFICATIONS FOR 200Wp CAPACITY SOLAR POWER PACKS ALONG WITH 3 NOS OF 14WATT LED BULBS & 1 NO OF 75WATT CEILING FAN WITH REQUIRED WIRING INCLUDING HOLDERS & SWITCHES.

SI. No.	Name of the Item	Description /Specifications (make, capacity etc)
1	Solar PV Module(s) 1.Type & make 2.Capacity of each module 3.No. of modules	
2	Module mounting structure	
3	Electronics Protection	
4	Solar Invertors	
5	Solar Charge Controller	
6	Battery Bank 1.Type & make 2.Capacity and Discharge rate of each battery 3.No. of batteries	
7	Battery mounting structure	
8	Electronics	
9	Mechanical hardware	
10	3 Nos of LED Bulbs	
11	1 No of Ceiling Fan	
12	Required Wiring Including Holders & Switches	

Signature of the Tenderer with seal

Annexure – C

TECHNICAL BID

TECHNICAL SPECIFICATIONS FOR 18W CAPACITY LED BASED SOLAR STREET LIGHTING SYSTEMS

SI. No.	Name of the Item	Description /Specifications (make, capacity etc)
1	Solar PV Module(s) 1.Type & make 2.Capacity of each module 3.No. of modules	
2	Battery Bank 1.Type & make 2.Capacity and discharge rate of each battery 3.No. of batteries	
3	Light Source Rating	
4	Mounting of Light	
5	Electronics	
6	Duty Cycle	
7	Autonomy	
8	GI Pole	
9	Civil Foundation	
10	Others	

Signature of the Tenderer with seal

Annexure-D

FINANCIAL BID

FINANCIAL BID FOR 200Wp CAPACITY SOLAR POWER PACKS ALONG WITH 3 NOS OF 14WATT LED BULBS & 1 NO OF 75WATT CEILING FAN WITH REQUIRED WIRING INCLUDING HOLDERS & SWITCHES.

S.No.	Name of the Item	Rate (Rs) (In words)
1	Cost of 200Wp SPV Power Pack comprising of SPV modules, inverter of 300VA, mounting structure, Lead Acid battery bank with rack of 12V, 150AH (or) 24V, 75AH and accessories, Earthing etc as per technical specifications along with 3 Nos of 14watt LED Bulbs & 1 No of 75watt Ceiling Fan with required wiring including holders & switches.	
2	GST on item – 1	
A	**Sub Total (Item 1 + Item 2)**	
3	Installation, testing and commissioning charges of 200KWp SPV Power Pack as per technical specification	
4	GST on item – 3	
B	**Sub Total (Item 3 + Item 4)**	
5	Charges for packing & forwarding, transport and delivery.	
6	GST on item – 5	
C	**Sub Total (Item 5 + Item 6)**	
Grand Total (A +B + C)		

NOTE: Bidders are required to follow the details of the technical specifications and GST while quoting rates for each item.

Signature of the Tenderer with seal

Annexure-E

FINANCIAL BID

FINANCIAL BID FOR 18W CAPACITY LED BASED SOLAR STREET LIGHTING SYSTEMS

S.No.	Name of the Item	Rate (Rs) (In words)
1	Cost of 18W LED based Solar Street Lighting System with the following components: i) 90Wp SPV Modules ii) 18W LED based luminair iii) 14.8V, 15.6Ah Lithium Ion Battery iv) 6 mtrs length GI pole v) Other Electrical & Electronic items	
2	GST on item – 1	
A	**Sub Total (Item 1 + Item 2)**	
3	Installation & commissioning including civil foundation charges for 18W LED based Solar Street Lighting System as per technical specification	
4	GST on item – 3	
B	**Sub Total (Item 3 + Item 4)**	
5	Charges for packing & forwarding, transport and delivery.	
6	GST on item – 5	
C	**Sub Total (Item 5 + Item 6)**	
Grand Total (A +B + C)		

NOTE: Bidders are required to follow the details of the technical specifications and GST while quoting rates for each item.

Signature of the Tenderer with seal