

Govt. of Jharkhand
Energy Department
Jharkhand Renewable Energy Development Agency (JREDA)
3rd Floor, S.L.D.C. Building, Kusai Colony, Doranda, Ranchi-834002.
Ph.: 0651-2491161, Fax: 0651-2491165,
E-mail: info@jreda.com; Website: www.jreda.com

e-Procurement Notice (Short Term Notice)

Tender Reference No. : 01/JREDA/SCADA/19-20

Dated: 06.06.2019

1	Name of the work	Supply, Installation, Testing & Commissioning including 05 years Comprehensive Maintenance Contract (CMC) of Street Lighting Control System with Web Based SCADA System from Deoghar to Basukinath Highway, Jharkhand.
2	Estimated Cost	Rs. 15,00,000/-
3	Period of Contract	05 (Five) Years
4	Time of completion	02 (Two) Months
5	Date of publication of NIT on website: http://jharkhandtenders.gov.in	07.06.2019 (Friday)
6	Last date & time for receipt of online bids	24.06.2019 (Monday) upto 05:00 PM
7	Submission of original copies of Bid fee & EMD (Offline)	24.06.2019 and 25.06.2019 up to 5.00 P.M.
8	Technical Bid Opening Date	26.06.2019 (Wednesday) at 03:00 PM
9	Name & address of office inviting tender	Director, Jharkhand Renewable Energy Development Agency(JREDA) 3 rd Floor, SLDC Building, Kusai, Doranda, Ranchi- 834002 (Jharkhand)
10	Contact no. of procurement officer	0651-2491167/68/61
	Helpline no. of e-procurement	0651-2491167/68/61

Any change can be seen on website: <http://jharkhandtenders.gov.in> & www.jreda.com
Further details can be seen on website: <http://jharkhandtenders.gov.in> & www.jreda.com

Sd/-
Director,
JREDA, Ranchi



JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY (JREDA)

3rd Floor, SLDC Building, Kusai, Doranda, Ranchi- 834002.

Ph.No: 2491161, Fax No: 0651-2491165

Web site: www.jreda.com, E-mail: info@jreda.com

Short Term Notice Inviting Bid

NIB No. 01/JREDA/SCADA/19-20

Jharkhand Renewable Development Agency incorporated as a society under the Society Act, 1860 under the administrative control of the Department of Energy, Govt. of Jharkhand for promoting use of renewable energy sources and having its registered office at Kusai Colony, Doranda, Ranchi, Jharkhand-834002. JREDA invites tender from reputed agencies / firm for the following work.

The objective of the system is to operate and monitor the 2153 No's of Street Lights powered by 100kWp X 5No's SPV Power Plant by installing a smart "Street Lighting Control System with RMS Unit".

Sealed bids are invited from financially sound firms having experience of similar nature of work for the following:

Name of the work	Earnest Money Deposit (Refundable) (In Rs.)	Cost of Tender Document Non-refundable (In Rs.)	Last date and time for submission of tender	Date and time for opening the tender
Supply, Installation, Testing & Commissioning including 5 years Comprehensive Maintenance Contract (CMC) of Street Lighting Control System with Web Based SCADA System from Deoghar to Basukinath, Jharkhand.	<ul style="list-style-type: none">Rs. 30,000/- (Rupees Thirty Thousand only) for General Bidder/StartupNil for MSME of Jharkhand.	<ul style="list-style-type: none">Rs. 5,000/- (Rupees Five Thousand only) for General Bidder/Startup.Nil for MSME of Jharkhand.	24.06.2019 (Monday) upto 05:00 PM	26.06.2019 (Wednesday) at 03:00 PM

Terms & conditions:

1. Tender documents can be purchased from the office of the undersigned during office hours on any working day till the day before submission of the tender after depositing the cost of Tender document (Non-refundable) in the shape of Bank Draft in favour of Director, JREDA payable at Ranchi. Tender document can also be downloaded from JREDA Website (www.jreda.com). In that case the cost of the document in the form of DD is to be enclosed with the technical part of the bid.
2. No postal request for issue of Tender document will be entertained.
3. The tender must be accompanied with the Earnest Money Deposit (refundable) in shape of Bank Guarantee or Demand Draft issued from any Indian nationalized/scheduled bank in favour of Director, JREDA payable at Ranchi. Proof of EMD must be attached with tender documents otherwise the tender will be rejected without assigning any reason thereof.
4. The undersigned reserves the right to issue the tender document /extend the date of sale/submission of tender/opening of tender and cancellation of tender without assigning any reason thereof.

Sd/-

Director,
JREDA, Ranchi



JHARKHAND RENEWABLE ENERGY DEVELOPMENT AGENCY (JREDA)

3rd Floor, SLDC Building, Kusai, Doranda, Ranchi- 834002.

Ph.No: 2491161, Fax No: 0651-2491165

Web site: www.jreda.com, E-mail: info@jreda.com

NIB No. 01/JREDA/SCADA/19-20

GENERAL TERMS AND CONDITIONS

Sealed tender is invited from firms/agencies for Supply, Installation, Testing & Commissioning including 5 years Comprehensive Maintenance Contract (CMC) of Street Lighting Control System with Web Based SCADA System form Deoghar to Basukinath, Jharkhand having prerequisite condition as detailed below:

ELIGIBILITY CRITERIA:

i. Technical

- a) Company/ Firm should be registered with GSTIN (Copy of supporting document)
- b) Consortium/ Joint venture shall not be considered.

ii. Experience:

- a) Should have commissioned **min 1 Projects of web based SLCS with SCADA System for Central Government / State Government / Govt. institute/ Govt. PSU of similar nature.**

iii. Turnover:

- a) Average Annual Financial Turnover in the last 3 years, ending **31st March 2018/19** should not be less than **5 Lakhs.**

Other Conditions:

1. Bidder shall bear all costs associated with the preparation and submission of the bid, journeys undertaken by them and subsequent bidding process till the award of the order to successful bidder and the JREDA shall in no case, shall be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

2. Performance Security

- a) Successful bidder shall submit a performance security @10% of the allotted work order value in the form of Bank Guarantee/DD valid for 60 days on or before 15 days from issuing work order. If Bank Guarantee will not be submitted within stipulated period from the date of issue of work order then JREDA may cancel the work order.
- b) The performance security shall be refunded / released to the bidder after expiry of 60 days from the actual date of successful completion.

3. Performance Guarantee:

- a) Successful bidder shall submit a performance guarantee @5% of the work order value in the form of Bank Guarantee valid for 4 months on or before release of any payment.
- b) The Performance Guarantee shall be submitted in the form of bank guarantee in favour of "Director, JREDA" payable at Ranchi from any Indian Nationalized bank/Scheduled bank.
- c) Non submission of Performance Guarantee within the time frame, shall lead to forfeiture of EMD and cancellation of Work Order.
- d) If Bidder fails to carry out the work allotted as per the provisions of the tender documents then such Bidder may be black listed for future awards of work.

Scope of work:

The Scope of work is for supply, Installation, Testing & Commissioning of Street Lighting Control System with Web Based SCADA System including 5 years Comprehensive Maintenance Contract (CMC) of LED Solar Home Lighting Systems Deoghar to Basukinath, Jharkhand. The objective of the system is to operate and monitor the street lights by taking power (3 phase) form existing solar Power Plant and by installing a smart "**STREET LIGHTING CONTROL SYSTEM with RMS UNIT**" and to record and report failure events to take corrective actions immediately.

The automation of street light consists of a feeder pillar (FP) already installed and a central control station (CCS) having SCADA software. The entire feeder pillar (FP) shall connect to the CCS through GRPS, and in case of failure of GPRS should be able to communicate through GSM.

The feeder pillar (FP) is already installed and has an incomer on terminal block only. Each feeder pillar shall have been connected with a quantum number of poles i.e. at least 50 no. of street lights on a single feeder pillar or according to load and that will be depend on street light LED power capacity. In each FP a Remote Monitoring System (RMS) with a contractor, timer, and outgoing feeders duly wired has to be installed along with Energy Meter (EM) and CTs which shall be connected on RS232/RS485. The RMS should work on GPRS only and in event of failure of GPRS shall work on GSM. The CCS shall be located at a control room where all the data shall be logged and always monitored on the SCADA.

1. **SLFP** shall be suitable for 415 V, 3 phases, 4 wires, and 50 Hz supply and shall outdoor type with canopy and shall be free standing floor type.
2. **SLFP** shall be provided with incoming & outgoing MCCB/MCB of appropriate rating and in desired quantity depending on total no. of circuit in use. Outgoing shall have at least one spare circuit all the time. Major switchgears shall have potential free terminals for communication with RMS.
3. **SLFP** shall be made up of CRCA sheet and shall be dust and vermin proof providing a degree of protection of IP54.
4. Doors shall be provided with all round neoprene gaskets. The incomer switchgear shall have interlock mechanism so as to prevent opening of the door when the switch is ON and to prevent closing of the switch when the door is not fully closed. However, a device for bypassing the door interlock shall be provided to enable the operation of the switch with the door open, when necessary, for examination/maintenance.
5. **SLFP** shall have communication based energy meter (RS 232/485) connected with RMS system. Power cable shall be connected through correct transformers for street light/load: a) Voltage in each phase, b) Current in each phase, c) Frequency, d) Power factor, e) Energy consumed
6. All accessible live connection/metals shall be shrouded and it shall be possible to change individual fuses, switches, from the front of boards. Panels without any danger of contact with live parts.
7. Every **SLFP** will have LED type SUPPLY ON "indicating lamps. Indicating lamps shall be of the clustered LED type and low watt consumption.
8. Internal wiring of the panel shall be done using flexible copper cables of appropriate sizes, all the wires shall be numbered and ferrules shall be provided for easy identification.
9. Proper clip on stud terminals of appropriate rating shall be provided for termination of incoming as well as outgoing cable inside the **SLFP**.
10. Each **SLFP** shall have appropriate antenna, GSM modem, RMS and major switchgears with potential free terminals for communication with RMS.
11. Inside the door lighting panels a single line circuit diagram/ description shall be fixed for ready reference.
12. Painting: As required all sheet steel enclosures of panels will be given two coats of thickness shall be minimum 50 microns.
13. AUTOMATION OF STREET LIGHT: -

The prime objective **Automation** shall be:

- i. To acquire data & to control operations at central monitoring unit (CMU) for the entire lighting system.
- ii. To record & to report failure events and to take corrective actions. Immediately.

The **Automation of street light** shall consist of **SLFPs** and Central Monitoring Unit (CMU). All SLFPs should communicate with CMU for transfer and execute the control operation depending on the command generated from CMU & mobile phones. **SLFP** shall consist of RMS, GSM modem with antenna, astronomical timer, electrical contractor and suitable switchgear etc. The communication between RMSs & SCADA shall be through GSM-GPRS/ EDGE network.

REMOTE MONITORING SYSTEM (RMS):

All RMSs shall be in network with a central workstation at CMU. Electrical parameters, viz, voltage, current, power consumption, power factor and delivered parameters pertaining to incomer of **SLFP** should be monitored and recorded at CMU at an interval of 15 min during its operation period (say sunset to sunrise) of lighting systems. All the control operation commands shall be communicated to the respective RMS instantaneously and should be executed by the corresponding RMS. The RMS as well as workstation should have a battery backup of minimum 6 hours. There should be a provision to increase number of workstations (up to max.5) control CMSs at CMU as and when need arises.

FURTHER, THE RMSs SHALL HAVE TO CONTROL FOLLOWING FUNCTIONS: -

1. RMS shall give the ON & OFF command to incomer electrical contractor mounted in **SLFP** and that contractor shall be control the existing contractor or motorized breaker which had been installed in ACDB ENCLOSURE in control room cabin.
2. Programmable geographical timer or astronomical timer to adjust switches ON & OFF timings automatically throughout the year based on sunset & sunrise timing. These timing must be considered as per geographical location of city (On daily basis).
3. Sensing correct in each outgoing feeder to indicate working of a group of streetlights.
4. The system must be capable to be upgraded to monitor the status of individual light fitting if required at later stage.
5. If RMS receive any command from any authorized mobile phone it must send all the details of the sender with time & date to the CMU for record and review purpose.
6. RMS will be able to commutation with existing SCADA System.
7. RMS will be used in similar application previously.

1. Technical Specification:

The RMSs should have the following specifications: -

- i. RMS shall have min 16 KB memory.
- ii. RMS shall have RS 485/RS232 serial port for connection to power analyzer/ energy meter.
- iii. RMS shall have RS232 port or inbuilt GSM modem for SCADA connectivity.
- iv. RMS shall be of rugged industrial grade and immune to electrical noise etc, as per IEC standers.
- v. RMS programming language shall be ladder/ST/IL or 'C'
- vi. Updated of data shall take place in a cycle of 15 minutes during operational timings (sun- set to sun-rise). However, in case of abnormal conditions/ failure events, it shall give immediate alarm.

The Energy meter has to be mounted in the same enclosure along with the Remote Monitoring System (RMS), there technical specifications are as follows:

1. Accuracy shall be class 1.0 or 0.5.
2. Parameter name and value display with seven segments LED.
3. Switching capacity shall be the 25A.
4. Measurements shall be true RMS, one second update.
5. There Aux supply shall be 80-300vac, 50/60 Hz with a burden of 4VA max.
6. Communication shall be RS. 485 or Rs232
7. CTPT ration shall be programmable.

SCADA SERVICES and SOFTWARE:

SCADA server at the CCS shall consist of following: -

1. Server architecture based on **TCP/IP** networking.
2. Standalone single server operation.
3. Additional servers for client load sharing and remote locations.
4. Fully automated data transfer between servers to field devices. This transfer shall include configuration, real time data, historic data and event lists. Database updates shall be on an incremental basis with tunable parameters.
5. Application shall be native 32-bit and 64-bit versions and supported on Windows Server and Workstation operating systems including Windows XP, Windows7(32 and 64 bit) and Windows Server 2008 R2 and later 104 keyboards.

System will comprise of following as a minimum at CCS:

1. No. PC (Windows latest with LCD and Microsoft Office Software)
2. 1 set UPS and 1set Graphic Printers.
3. 1 No RTU/ PLC panel with Processor only.
4. 1 No M2M gateway GPRS Modem.
5. 1No Broadband connection for internet access.
6. 1 No PC Server.

Payment terms and conditions:

The payment shall be made to the successful bidder as per the work order issued basing on the L1 price arrived at as per the break up in *Annexure 4*.

Subject to any deduction, which JREDA may be authorized to make under this contract, the contractor shall be entitled to payment as follows:

1. **90 %** of the amount for Supply, Installation, Testing & Commissioning of Street Lighting Control System with Web Based SCADA System,(*as per Annexure 4*) will be paid on receipt of the bill dully certified by the authorized officer of JREDA along with all requisite Documents as per the work order and rest **10%** of the amount shall be released after successful performance of the system for one month.

2. **CMC** will be paid after completion of each year (from 2nd Year) with successful and satisfactory maintenance and management of Street Lighting Control System with Web Based SCADA System with submission documents and proofs as per JREDA requirement.

Note: Technical & Financial Bid should be submitted in separate envelope with sealed & super scribed as **“Technical Bid for SLCS with SCADA System ”** and **“Financial Bid for SLCS with SCADA System ”** respectively and both the Bid parts should be sealed in third envelope duly superscribed NIB no./Subject/Bidder’s name & address.

Agreed and accepted the above terms and conditions

(Signature & Seal of the Firm/ Agency/ Supplier)

**NIB No. 01/JREDA/SCADA/19-20****Check list**

Sl. No.	Particulars	Yes/No
1	Bid fee (Rs. 5000/-)	
2	Earnest Money Deposit (EMD) (Rs. 30,000/-)	
3	Copy of self attested PAN Card with Income Tax Return (ITR) of last financial year.	
4	Copy of the audited balance sheet of last three financial year.	
5	Copy of self attested GST Registration Certificate	
6	Copy of Experience Certificate of last three years of similar work	

(Signature & Seal of the Firm/ Agency/ Supplier)



Format For Financial Requirement – Annual Turnover

NIB No: 01/JREDA/SCADA/19-20

[On the letterhead of Bidding Company]

To,

The Director,
Jharkhand Renewable Energy Development Agency
3rd Floor, S.L.D.C. Building,
Kusai Colony, Doranda,
Ranchi - 834002

Dear Sir,

Sub: **Supply, Installation, Testing & Commissioning including 5 years Comprehensive Maintenance Contract (CMC) of Street Lighting Control System with Web Based SCADA System from Deoghar to Basukinath, Jharkhand.**

We certify that the Bidding Company had an average Annual Turnover of Rs. -----
---- based on audited annual accounts of the last three years ending 31.03.2018/19.

Sl. No.	Financial Year	Turnover (in Rupees)
1.	2015-16	
2.	2016-17	
3.	2017-18	
4.	2019-20	
	Average Annual Turnover	

Authorised Signatory
(Power of Attorney holder)

Statutory Auditor
(Stamp & Signature)

Date:



Details of Orders Received and Executed in Last 3 Years

NIB No: 01/JREDA/SCADA/19-20

Details of Orders Received & Executed as per NIB for Govt. Organization during Last Three Years.

SL. No.	Name of Agency/ Organization	Work Order No., Date.	Date of commissioning and full execution with letter no. & date of the performance certificate	Page number of the Work order/ purchase order submitted	Page number of the performance certificate/recommendation submitted

Yours faithfully,

(Signature of Authorized Signatory)

Name :
Designation :
Company Seal :

Note:

- (a) Attach Photocopies of Purchase Orders
- (b) Attach Photocopies of Certificate of Satisfactory Performance Issued by Concerned Nodal Agency/PSU/ Govt. Organization
- (c) Separate sheet may be used for giving detailed information in seriatim duly signed with page number. Proof of work order/purchase order and corresponding performance certificate should be submitted/enclosed in the bid. Non-submission of the work orders and corresponding performance certificate will be treated as no experience.



Financial Bid

**NIB No: 01/JREDA/SCADA/19-20
(To be submitted on the letterhead of the company/firm)**

SR. NO.	PARTICULARS	QTY	UNIT RATE	TOTAL RATE
1	AUTOMATION OF STREET LIGHT FROM DEOGHAR TO FROM BASUKINATH, JHARKHAND.			
A)	Supply, Installation, Testing & commissioning of GSM/GPRS based Street Light Control system with RMS Unit consisting with: -			
i	Enclosure box (600HX400WX250D, IP54 type, Body thickness-1.6 mm, Double door canopy type, Dust & Vermin Proof, Outdoor type) with Stand -600 mm Height.	5		
ii	Energy meter-Aux-80-230 V AC, RS-445/232, Class-1.0/0.5	1		
iii	Current transformer 50-100/5	3		
iv	Miniature circuit breaker, 40/63/80A, 25KA, TP	1		
v	Contractor - 18/32/40/50/70A, TP	1		
vi	Push Button, On/Off with 1 NO/1NC	2		
vii	Selector switch-NO contact, 2 way with off	1		
viii	Relay, 2 CO, with base for control	1		
ix	GPRS/GSM module-AUX-5 to 30 V DC, RS-485/232 with Patch antenna-5 mtr. Length	1		
x	SIM card with 2g/3g/4g/connection including 512/1098 MB internet pack	1		
xi	Wire & wiring accessories i.e. thimble, lux, tie, tape, PVC ducts, MCB channels etc.	1Set		
B)	SCADA based Street Light Automation system for controlling & monitoring the street light- manual / auto mode including GSM/GPRS module compatible to transfer/gather data form field devices to Central Location which having TCP/IP based server (Local or cloud based), single server compatible to control 100 Feeder Pillars in single time.			
i	500 Tags SCADA software	1		
ii	PC Server with Latest configuration	1		
iii	22" LCD Monitor	1		
iv	Keyboard, Mouse	1		
v	Report Generation Software	1		
vi	USB key	1		
vii	Laser Printer	1		
viii	GSM/GPRS Module	1		
ix	IFD Unit at server end with all accessories.	1 set		
C)	CMC 1st year		Free	
	CMC 2nd year			
	CMC 3rd year			
	CMC 4th year			
	CMC 5th year			
	Total			

1. Above quoted price is complete in all respect as per Technical Specifications inclusive of all Central/State/Local taxes & duties, packing, forwarding, transit insurance, loading & unloading, transportation & other charges etc.
2. Certified that rates quoted are as per specifications, terms & conditions mentioned in the bid document.

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal:

(This bid Performa must be submitted duly signed in case separate sheet is submitted)



Format for Submitting Bank Guarantee for Earnest Money Deposit

NIB No: 01/JREDA/SCADA/19-20

(To be submitted in Rs. 100/- Non-Judicial Stamp Paper to be purchased in the name of the issuing bank)

To,

The Director,
Jharkhand Renewable Energy Development Agency
3rd Floor, S.L.D.C. Building,
Kusai Colony, Doranda,
Ranchi - 834002.

WHEREAS (Contractor's name) (hereinafter referred to as "Contractor"), a company registered under the Companies Act, 1956 and having its registered office at is required to deposit with you, the Purchaser, by way of Earnest Money Rs. (Rupees only) in connection with its tender for the work with reference to Notice Inviting Bid (NIB) No. dated as per specification and terms and conditions enclosed therein.

WHEREAS the Contractor as per "Notice Inviting Bid, point no. 3 Earnest Money" has agreed to establish a Bank Guarantee in Your favour through us valid up to (Date) instead of deposit of earnest money in cash.

WHEREAS you have agreed to accept a Bank Guarantee from us in instead of earnest money in cash from the Contractor.

1. We (Bank) hereby agree and undertake to pay you on demand the said amount of Rs. (Rupees only) without any protest or demur in the event the Contractor/Tenderer after submission of his tender, resiles from or withdraws his offer or modifies the terms and conditions thereof in a manner not acceptable to you or expresses his unwillingness to accept the order placed and/or letter of intent issued on the Contractor/Tenderer for the work under "Notice Inviting Bid Ref. No.:" **01/JREDA/SCADA/19-20**.
2. Your decision as to whether the Contractor/Tenderer has resiled from or has withdrawn his offer or has modified the terms and conditions thereof in a manner not acceptable to you or has expressed his unwillingness to accept the order placed and/or Letter of Intent issued by you on the Contractor/Tenderer

for the work under "Notice Inviting Bid Ref. No.: **01/JREDA/SCADA/19-20** in this regard, shall be final and binding on us and we shall not be entitled to question the same.

3. Notwithstanding anything contained in the foregoing, our liability under this Guarantee shall be restricted to Rs. (Rupees only).
4. This Guarantee shall remain valid and in full force and effect up to (Date) and shall expire thereafter unless an intimation is given to the Bank by you earlier in writing discharging us from our obligation under this Guarantee.
5. We shall not revoke this Guarantee during its currency except by your consent in writing.
6. This Guarantee shall not be affected by any change in the constitution of the Contractor/Tenderer or yourselves or ourselves but shall ensure to your benefit and be enforceable against our legal successors or assignees by you or your legal successors.
7. Notwithstanding anything contained herein above unless a demand or claim under this Guarantee is made on us in writing within six months from the date of expiry of this Guarantee we shall be discharged from all liabilities under this Guarantee thereafter.
8. We have power to issue this Guarantee under our Memorandum and Articles of Association and the undersigned who is executing this Guarantee has the necessary power to do so under a duly executed Power of Attorney granted to him by the Bank.

Signed and Delivered
For and on behalf of Bank.
(Banker's Name)

Name of Bank Manager:
Address
.....