Letter No: -   ५८१

Dated: - 15/03/2023

From,

Assistant Director,
BREDA, Patna

To,

Senior Technical Director,
National Informatics Centre, 5ᵗʰ Floor, NIC New State Centre,
Soochna Bhawan Campus, Infront of New Secretariat, Bailey Road,
Patna – 800015, Bihar (India)

Sub: - Regarding estimate for Design cum Development along with 5 years of Operations & Maintenance of Centralized Monitoring System (CMS) including Dashboard for Smart Solar Street Lights under 'Mukhyamantri Gramin Solar Street Light Yojana-MGSSLY' in the State of Bihar.

Sir,

With reference to the subject mentioned above, it is requested to provide the estimate for 'Design cum Development along with 5 years of Operations & Maintenance of Centralized Monitoring System (CMS) including Dashboard for Smart Solar Street Lights under 'Mukhyamantri Gramin Solar Street Light Yojana-MGSSLY' in prescribed format enclosed as Annexure-II in line with the detail scope of work attached herewith as Annexure-I.

Kindly furnish the detail as soon as possible.

Encl: i. Annexure-I
      ii. Annexure-II

Yours Sincerely,

Assistant Director,
BREDA, Patna

DGM(NDCCP)
Pl. discuss & Co-ordinate
Q.K. Chrivastava
16/3/2023

Sh. Ani's
Project Manager 21/03/23
7319942789

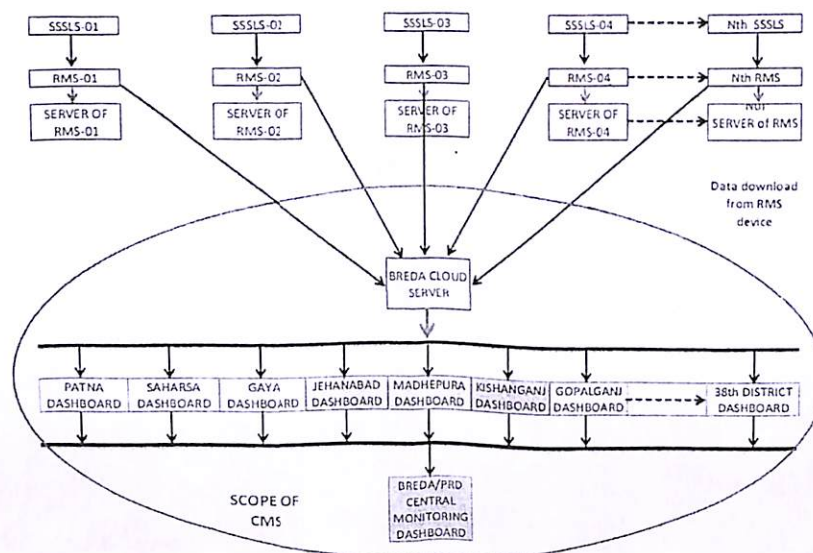D:\ESPP Supaul/BERC letter for commissioning

SCOPE OF WORK

The Scope of work includes "Design cum Development along with 5 years of Operations & Maintenance of Centralized Monitoring System (CMS) including Dashboard for Smart Solar Street Lights under 'Mukhyamantri Gramin Solar Street Light Yojana-MGSSLY' in the State of BIHAR".

The scope of work also includes mandatory opening of Central monitoring system in all 38 district/s and two (2) central monitoring system at BREDA & PRD, Patna, as specified through which monitoring & maintenance services along with reporting should be provided as stipulated in Bid document. The monitoring shall include detailed remote monitoring and identification for fault & the same has to be conveyed to BREDA, PRD & Concerned Successful Bidder for its rectification through IT Enabled System (ITES).

Apart from this, the agency shall also have its own office/ Service center with sufficient manpower at Patna wherein 24X7 monitoring of the overall Central Monitoring Systems (CMS) and required IT support has to be provided for complaint addressing and their redressal. The following activities under the Scope of Works have to be considered for calculation of project cost to be quoted by the bidder:

1.1 RMS system will send the data to the CMS system. CMS system has capability to process the received data from RMS system, and convert it into useful information as per requirement. The CMS should have the capability to process the RMS data for 15 Lakhs SSLS within 30 minutes.

1.2 The centralized monitoring system will fetch the data from the RMS installed by the Executing agency of the SSLS.

1.3 The RMS hardware device will send the data to cloud server of the CMS for each smart solar street light system.

1.4 There are separate CMS for each of the 38 nos. district at district level and 2 nos., 1 each at Panchayati Raj Dept, Patna and BREDA, Patna separately.

1.5 CMS Software to have the asset management feature of tracking of each light, unique asset tag no., make, wattage, date of installation, date of replacement, reason of replacement, PV module details, battery details.

1.6 Cloud Server uptime should be a minimum of 99.5% with disaster backup and sufficient storage capacity and processing power to ensure stable operation of CMS (Central monitoring System) throughout the contract period without failure.

1.7 The CMS design and development agency shall ensure that the supplied CMS should be hack proof and leak proof to avoid the malicious activity or event.

1.8 CMS shall have a dedicated server i.e. cloud-based arrangement to ensure a 100% guarantee of the data transmission and real-time data storage.

1.9 Data authenticity and validation have to be ensured.

1.10 Cyber security, safe database management, data retrieval, and trouble-free operation of software and allied systems (24*7) to be ensured.

1.11 It can generate MIS report in Matrix as well as in Graphical format based on uptime, fault penalty, history, energy-saving, operational hours, Luminary failure.

1.12 Different user authorization levels should be settable and the central cloud server should be capable of handling high traffic.

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SSSLS-01      SSSLS-02      SSSLS-03      SSSLS-04  ------->  Nth SSSLS
   |             |             |             |                   |
   v             v             v             v                   v
RMS-01        RMS-02        RMS-03        RMS-04   ------->    Nth RMS
   |             |             |             |                   |
   v             v             v             v                   v
SERVER OF     SERVER OF     SERVER OF     SERVER OF  ------->  Nth
RMS-01        RMS-02        RMS-03        RMS-04              SERVER of RMS
```

Data download from RMS device

BREDA CLOUD SERVER

| PATNA DASHBOARD | SAHARSA DASHBOARD | GAYA DASHBOARD | JEHANABAD DASHBOARD | MADHEPURA DASHBOARD | KISHANGANJ DASHBOARD | GOPALGANJ DASHBOARD | ------> | 38th DISTRICT DASHBOARD |

SCOPE OF CMS

BREDA/PRD CENTRAL MONITORING DASHBOARD

1.13 Software Development and integration of each Smart Solar Street Light with CMS for monitoring of the overall system performance & functioning data.

1.14 The software developed shall be the sole property of BREDA. All the licenses related to patent, licensing, copyright management, security. antivirus etc. shall be in the name of BREDA. The Successful bidder has to take prior permission from BREDA for fulfillment of this clause.

1.15 Fetching data from RMS installed by the Successful Bidder directly to the cloud server of CMS (the IMEI number/geo tagging data/ Serial no. of SSLS and other technical data etc. shall be sought from the Successful Bidder of SSLS).

1.16 Storage and processing of the SSLS data in the cloud server like Energy generated. CO2 Saved, Coal Saved, Water Saved, Tree saved, Oil Equivalent etc., along with regular monitoring data of the SSLS.

1.17 The cloud server as required has to be provided and maintained as per relevant applicable govt. guidelines.

1.18 The CMS system/ software should be auto-scalable in order to accommodate nodes for integration in required quantities as and when required.

1.19 Development of web-based user Interface for display of dashboard including Faults/alerts/ SMS/Warning auto email sending to authority & Successful Bidder including login id at different levels as required by BREDA/PRD.

1.20 Development of Mobile APP (Android, iOS) for display of dashboard including Faults/alerts/ SMS/Warning auto email sending to authority & Successful Bidder including login id at different levels as required by BREDA/PRD.

1.21 Setting up of one (1) district level monitoring station (location shall be provided by BREDA PRD for all 38 districts including) having visual dashboards with the aid of LED displays (65 inch) enabled with high-speed network connectivity for seamless data updating. All monitoring station has to be assisted by one (1) technical personnel as per details mentioned in annexure.

1.22 Setting up of two (2) central monitoring center at BREDA & PRD. Patna. (location shall be provided by BREDA PRD) having visual dashboards with the aid of LED displays (65 inch) enabled with high speed network connectivity for seamless data updating.

1.23 The CMS set up at BREDA shall be assisted by Six (06) technical personnel as per details mentioned in annexure.

1.24 The CMS set up at PRD shall be assisted by Two (02) technical personnel as per details mentioned in annexure.

1.25 Successful bidder has to maintain the manpower availability as per above clauses from the period of successful demonstration of CMS till 05 years of service.

1.26 In case, the manpower availability needs to be enhanced or extended (duration beyond 05 years), the same shall be done at the discovered price break-up of the financial bid.

1.27 The CMS dashboard should display the no. of faulty street lights in each district, block, panchayat, ward, agency wise separately. The same shall be designed in consultation with BREDA & Executing Agencies.

1.28 The CMS shall initiate/trigger alert in case of fault, describing the fault along with color-coding for unresolved faults based on time. Example- Orange color for the fault which been unresolved for 0-24 hours, Yellow color for 24-48 hours and Blue color for 48-72 hours, Red for more than 72 hours. The same shall be designed in consultation with BREDA & Executing Agencies.

1.29 CMS Software should have the asset management feature of tracking of each light, unique asset tag no., indexing of pole. make of various components of SSLS, wattage, and date of installation, date of replacement, reason of replacement, PV module details, and battery details.

1.30 Cloud Server uptime should be a minimum of 99.5% with disaster backup and sufficient storage capacity and processing power to ensure stable operation of CMS (Central Monitoring System) throughout the contract period without failure.

1.31 The CMS vendor shall ensure that the data for generation of reports shall be available for a period of 18 months.

1.32 The CMS vendor shall offer cloud infrastructure from a MEITY (Ministry of Electronics and Information Technology) empaneled service provider only.

1.33 The virtual machine availability SLA shall be minimum of 99.5%.

1.34 The application must be designed in such a way that the users can add/edit new reports and data connections with no coding knowledge.

1.35 The CMS must have a comprehensive user management in place to ensure only authorized personnel can add/edit the dashboards.

1.36 The CMS application must be designed to adhere to the best practices of cyber security compliance.

1.37 The CMS design and development agency shall ensure that the supplied CMS should be hack proof and leak proof to avoid the malicious activity or event.

1.38 All data shall be received preferably in JSON format, but if in case the data is received in any other formats like CSV. XML, etc.. the same has to be converted for data analysis, storage and reporting.

1.39 CMS shall have a dedicated server i.e., cloud-based arrangement to ensure a 100% guarantee of the data transmission and real-time data storage for the last 5 years and archived data to 6 years for the contract period.

1.40 Data authenticity and validation have to be ensured as per relevant and concerned government guidelines.

1.41 Cyber security, safe database management, data retrieval, and trouble-free operation of software and allied systems (24*7) to be ensured as per relevant and concerned government guidelines.

1.42 It can generate MIS report in Matrix as well as in Graphical format based on Uptime, fault

penalty, history, energy-saving, operational hours, Luminary failure etc.

1.43 Different user authorization levels should be settable and the central cloud server should be capable of handling high traffic.

1.44 Preparation of a consolidated report of SSLS monthly in Hard copy as well as soft copy. Set up of two (02) centralized command data center at Patna including CMS (Central Monitoring System) at each district as required by BREDA/PRD.

1.45 Provide Main server as cloud server for storage of RMS data of each SSLS for 5 year which can be expanded as per requirement in future as required by BREDA/PRD without any additional cost.

1.46 The bidder shall have to develop a dashboard for display of main parameters of each SSLS with location which can be visualized on Google- Map.

1.47 All the design and development shall be as per best latest industrial technical specification and RFP norms.

1.48 The Agency shall be responsible/ liable to provide any other item/ facility required to complete the scope of work mentioned in the RFP/ services not mentioned in this document but required for Successful **Design cum Development along with 5 years of Operations & Maintenance of Centralized Monitoring System (CMS)** including **Dashboard**, without any additional financial liability whatsoever.

1.49 Standard Project contingencies & uncertainties should be taken into account, while quoting for the RFP.

1.50 The Bidder is advised to read carefully all instructions and conditions appearing in Bid document and understand the scope of work fully. All information and documents required as per the Bid document mustbe furnished with the bid. Failure to provide the information and/ or documents as required shall render thebid unacceptable for evaluation of technical bid. All bidders qualifying technical stage shall be treated at par. Financial Bid of bidder qualifying at technical stage only shall be opened.

1.51 The main objective is to implement a monitoring software application system (centralised reporting dashboard) at state, District, block and Panchayat etc. with complete ICT (Information communication technology) at DC and DRC (Data Centre- Disaster Recovery Centre) on cloud along with 5 year operation and maintenance. The proposed system needs to collect required data from different RMS spread across state. There are around 15 lakhs RMS and proposed system needs to collect required data from these RMS to make available dashboard and reports centrally for monitoring by different stakeholders. The brief details of required software application has been given below:

- Agency can supply, install, configure, customize roll out either COTS (Commercial Off-The-Shelf- mean a system that already exists and delivers a common set of functions) application software product or can customized development of application software (BE-SPOKE).

- In case of COTS product, agency needs to submit complete customized source code along with other cots products so that implemented software applications can be managed by any third party independently.

- In case of customized development of application software (BE-SPOKE) agency needs to submit complete source code of application software so that implemented software applications can be managed by any third party independently.

- The selected agency would deliver functional software and complete documentation in the form of system & user manuals, studies conducted for the projects, etc.

    Tentative list of services to be delivered but not limited has been mentioned below:
- Monitor the SSLS through RMS device installed by BREDA empanelled executing agencies through Single dashboard.

- Check the installation status of the devices at central and district level particularly

- Provide Functional and non-functional street light report as on defined parameters

- Send Email/SMS/ Whats-app Message alert to concern key stake holder (Executing Agency of SSLS, any other person authorised by BREDA/PRD) if any street light non-functional in real-time.

- Monitor all the required parameters as mentioned in RFP.

- Filter with District, block, ward, and other relevant parameters and get the data for the site needed.

- Generate the required reports for required period of time for a single SSLS or consolidate report of for all SSLS.

- Automatic alert generation for any kind of failures in the equipment as per defined criterion

- Generate required MIS reports for better decision making

- Generate performance report of street light on basis of operation hour and other required parameter

- Facility to export MIS report in excel and pdf.

- Central Dashboard

- Monitor all the RMS devices deployed in the state by single dashboard. Get the consolidated and individual data for all the parameters required.

- Derive and fetch parameters such as total energy saving, total revenue saved and many more.

- Automatic fault alert/Notifications management (SMS/email etc)

- Customized Report generation & management.

- Android, iOS mobile applications for monitoring.

- Automatic onboarding of SSLS-RMS through mobile app to CMS dashboard

- Data from all the devices will be received at proposed cloud servers at DC and DR

- The received data will be then used for central dashboard, district dashboard and user dashboard after processing as per business logic.

- Proposed solution and ICT (Information and Communications Technology) infrastructure (Servers, Connectivity, storage etc at cloud) shall be capable of handling data from all the devices and processing real-time data.

- Proposed solution must be capable of handling different communication protocol to receive, send the data from RMS device installed by different Executing agencies empanelled by BREDA for the MGSSLY.

- Proposed solution have capability of handling encrypted data at the cloud server (for data security) & decrypt the data for further processing

- Different Dashboards

- User Management

- Admin Module

- Grievance Redressal System

- Mobile application for users

- Any other services mentioned in RFP and required by purchaser /BREDA

- Agency shall be responsible for providing all the required tools, technique to make available required services to purchaser/BREDA

Estimate for CMS Implementation

	COST HEAD	Unit	Qty	Rate in INR	Amount in INR
PART-A	i. CMS Infrasrtructure Development at Headquarter level (2 nos.) and Field (38 nos.) (as per attached BOQ-I) along with its maintenance for 5 years	Nos.	40.0		-
	ii. Development of CMS Application Software with perpetual license to deliver all the services as per scope of work along with its maintenance for 5 years	Nos.	1.0		-
Total Cost (Part-A: i+ii)					-
PART-B	Integration of Installed RMS devices of SSLS with CMS along with Cloud infrastructure.	Nos.	1,500,000.0		-
PART-C	Deployment of Manpower at Headquarter level (8 nos.) and Field (38 nos.) for 5 years.	Man-Months (46 Manpower * 60 Months)	2,760.0		-
Total Cost (PART-A + PART-B+ PART-C)					-

Electronic Reservation Slip (ERS)

Confirmtkt →

IRCTC

Boarding From	To
KANPUR CENTRAL (CNB)	**ANAND VIHAR TRM (ANVT)**
Departure* 09:20 11-Jun-2023	**Arrival* 15:10 11-Jun-2023**

PNR	Train No./ Name	Class
6119622129	12815/NANDANKANAN EXP	**SLEEPER (SL)**
Quota	Distance	Ticket Printing Time
GENERAL (GN)	**427 KM**	**13-May-2023 16:05:11 Hrs**

Passenger Details

#	Name	Age	Gender	Booking Status	Current Status
1.	SANDEEP MAURYA	25	M	CNF/S4/53 MB	CNF/S4/53 MB
2.	NEHA DEVI	23	F	CNF/S4/54 UB	CNF/S4/54 UB

Acronyms

RLWL : REMOTE LOCATION WAITLIST   RSWL : ROAD-SIDE WAITLIST   PQWL: POOLED QUOTA

IR recovers only 57% of cost of travel on an average.

भारतीय रेल यात्रा की लागत का औसतन केवल 57% वसूल करती है।

Payment Details

Ticket Fare : 590
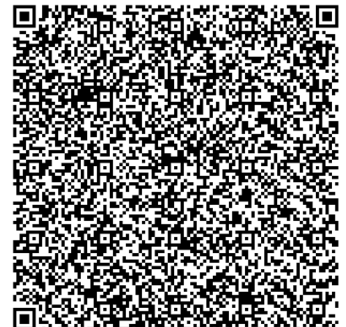
IRCTC Convenience Fee : 17.7

Agent Service Charge : 19.99

Travel Insurance Premium : 0.7

PG Charges : 0.0

Total Fare : 629.0

PG Charges as applicable (Additional)

IRCTC Convenience Fee & Agent Service Charges are charged per e-ticket irrespective of no. of passengers on the ticket.

* The printed Departure and Arrival Times are liable to change. Please check correct departure, arrival from Railway Station Enquiry or Dial 139 or SMS RAIL to 139

Agent Details

Principal Agent Name : Confirm Ticket Online Solutions Private Limited

Customer care Email : support@confirmtkt.com   Customer Care Contact : 08068243910

Prescribed original ID proof is required while travelling along with SMS/ VRM/ ERS otherwise will be treated as without ticket and penalized as per Railway Rules.

Indian Railways GST Details

Invoice Number : NA   Address : NA

Supplier Information

HSN code : NA   GSTIN : NA

Recipient Information

GSTIN : NA

Name : NA   Address : NA

Taxable Value : 0.0

CGST Rate : 0.0%	CGST Amount : 0.00
SGST/UGST Rate : 0.0%	SGST/UGST Amount : 0.00
IGST Rate : 0.0%	IGST Amount : 0.00

Total tax : 0.00

Place of Supply : NA   **State Code/Name of Supplier: NA**

Instructions

1. Prescribed Original ID proofs are:- Voter Identity Card / Passport / PAN Card / Driving License / Photo ID card issued by Central / StateGovt./ Public Sector Undertakings of State / Central Government, District Administrations, Municipal bodies and Panchayat Administrations which are having serial number / Student Identity Card with photograph issued by recognized School or College for their students / Nationalized Bank Passbook with photograph / Credit Cards issued by Banks with laminated photograph / Unique Identification Card "Aadhaar", m - Aadhaar, eAadhaar. / Passenger showing the Aadhaar / Driving Licence from the "Issued Document" section by logging into his / her DigiLocker account considered as valid proof of identity. (Documents uploaded by the user i.e.the document in "Uploaded Document" section will not be considered as a valid proof of identity).

2. PNRs having fully waitlisted status will be dropped and automatic refund of the booking amount shall be credited to the account used for payment for booking of the ticket.Fully waitlisted e - ticket are not allowed to board the train.However, the names of PARTIALLY waitlisted / confirmed and RAC ticket passenger will appear in the chart and will be allowed to board the train.

3. Passengers travelling on a fully waitlisted e-ticket will be treated as Ticketless.

4. Obtain certificate from the TTE /Conductor in case of (a) PARTIALLY waitlisted e-ticket when LESS NO. OF PASSENGERS travel, (b)A.C FAILURE, (c)TRAVEL IN LOWER CLASS.This original certificate must be sent to GGM(IT), IRCTC, Internet Ticketing Centre, IRCA Building, State Entry Road, New Delhi - 110055 after filing TDR online within prescribed time for claiming refund.

5. In case, on a party e-ticket or a family e-ticket issued for travel of more than one passenger, some passengers have confirmed reservation and others are on RAC or waiting list, full refund of fare, less clerkage, shall be admissible for confirmed passengers also subject to the condition that the ticket shall be cancelled online or online TDR shall be filed for all the passengers upto thirty minutes before the scheduled departure of the train.

6. In case of train cancellation on its entire run, full refund is granted automatically by the system. However, if the train is cancelled partially on its run or diverted and not touching boarding / destination station, passengers are required to file online TDR within 72 hours of scheduled departure of the train from passengers boarding station.

7. Never purchase e-ticket from unauthorized agents or persons using their personal IDs for commercial purposes. Such tickets are liable to be cancelled and forfeited without any refund of money, under section(143) of the Indian Railway Act 1989.List of authorized agents are available on www.irctc.com E - Ticket Agent Locator.

8. For detail, Rules, Refund rules, Terms & Conditions of E-Ticketing services, Travel Insurance facility etc. Please visit www.irctc.co.in

9. While booking this ticket, you have agreed of having read the Health Protocol of Destination State of your travel. You are again advised to clearly read the Health Protocol advisory of destination state before start of your travel and follow them properly.

10. The FIR forms are available with on board ticket checking staff, train guard and train escorting RPF/GRP staff.

11. Variety of meals available in more than 1500 trains. For delivery of meal of your choice on your seat log on to www.ecatering.irctc.co.in or call 1323 Toll Free.For any suggestions / complaints related to Catering services, contact Toll Free No. 1800 - 111 - 321(07.00 hrs to 22.00 hrs)

12. E-ticket cancellations are permitted through respective agent only

Agent Service Charge for E-Ticket inclusive of tax (nonrefundable)

Class	Service Charge
Non - AC class	Rs.20/-
AC class including FC	Rs.40/-

14. National Consumer Helpline (NCH) Toll Free Number: 1800-11-400 or 14404

15. You can book unreserved ticket from UTS APP or ATVMs (Automatic Ticket Vending Machines) located in Railway Stations.

Contact us on: support@confirmtkt.com OR 24*7 Hrs Customer Support at 08068243910